

IND

model car *Science*

AMERICA'S
NO. 1 MAGAZINE OF
MODEL CAR BUILDING
& TABLE TOP RACING
JANUARY 1964 35¢

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"T" TRUCK

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'41 WILLYS



ON THE DRAG STRIP

"Swindler II," the hottest of the hot '41 Willys competition coupes. This Stone-Woods-Cook gasser is a NHRA record holder with a top speed of over 140 mph in the quarter mile.



Doug "Cookie" Cook, driver of the Stone-Woods-Cook '41 Willys competition coupe.

There are model show trophy-grabbin' features all over this Revell 1/25 scale model of "Swindler II". Turnable front wheels, metal axles, opening hood and trunk and opening doors so admirers can really dig the super detailed competition interior.

Lots of speed goodies, too. "Blown" Olds engine, M & H Racemaster drag slicks, competition exhaust and authentic NHRA decals. And Hey! What a great body for you electric drag strip drivers to use on your next competition special!

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ENGLAND page 54

COVER — Fine examples of the advanced state of model car building today share this month's cover. George Morford's beautiful dragster demonstrates what can be done for show, while Bill Sippel's unique racing chassis gives an idea of what's new in the go department.

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MODEL MAIL

MODELING TIPS

Here are a few tips I have found valuable in the many years I have been modeling: Try using the reverse side of outer wrapper from a package of gum; it makes an ideal chrome firewall for early model cars. I also use a red Magic Marker on chrome to make parking lights and blinkers.

Pete Thibeault
Manchester, N.H.

I'm only a novice builder, but your magazine has improved the quality of my models 100%. Here are a couple ideas I have picked up from fellow builders: for restyling models, a heated knife or nail file is more desirable in cutting plastic. Another short cut for polishing plastic: try using vaseline, it's great!

William R. Richardson, Jr.
Ruxton, Md.

In your August MCS article about the "250" Ferrari Testa Rossa, you refer to the small "bubbles" on the side of the nose section as not being on the prototype. Maybe they weren't on the prototype, but they were on the production machines. The car #14 shown in your picture is a shining example, as all of the cars at Sebring came equipped with these "bubbles." I would also suggest placing Lucas head lamps behind the grille as the production cars had them.

Sam Thompson
Harbor City, Calif.

We always appreciate the efforts that readers put forth to help other model builders. If you have any "inside" info on any car featured in MCS, send it in, so other builders can benefit from your knowledge.

KIT OR PARTS?

Some scale Custom Car Parts are claimed to be ideal for supplementing regular models, and for "scratch-building." However, it should be made clear that the user is hardly scratch-building his own creation, but merely taking certain pre-designed parts and fitting them together, in one of many preset patterns. This so-called "scratch-building" is not only lacking in originality as far as design is concerned, but it can run into plenty of money as well. I think that charging .49 to .89 cents for what is merely a small part of what would have been in a kit retailing for about \$2.00, is ridiculous. Each individual package contains only one set of parts: You buy a body for .89 cents but have to pay another 69 cents to get tires, and another 69 cents for wheels, another 69 cents for

slicks, and on, and on. Speed equipment, chassis, and engine add another \$2.07. Your total for this "creation" may now run as high as \$6.00. Rather than pay that much for a custom, I would suggest an alternate of buying two or three kits containing the necessary equipment. While this method may prove more expensive for the first car, there will be a lot of speed equipment, bodies, wheels, and spare parts left over. These can supplement a later car, thus saving an undeterminable amount of money in the long run.

Richard Deight
Long Beach, Cal.

BACK FROM BRITAIN

I have met your British correspondent (Mr. A.M.L. Kennaugh) and consider his viewpoints on slot racing as that of an expert. I participated in this year's air mail meeting at Leamington Spa but was unable to reach the semi-finals in either the GP or Sports class.

Now that I am back in the U.S., it looks as if I will have to build my own track in order to carry on — unless some of your readers know of a slot racing club in the Washington D.C. area.

Major D. R. Livengood, Jr.
2219 Priscilla Lane
Alexandria, Virginia

Anyone knowing of a good track in the D.C. area, please drop the Major a line.

ONE OF A KIND?

We, the boys of rooms 241 and 243, have a Strombecker road racing set connecting the two rooms through the bathroom. Different sections of the 53-foot course are modeled after world famous real road racing circuits. We have cars of all classes. One of our favorites has a Volkswagen body, a blown Chrysler engine and a Pittman DC 704A motor. We believe that we have the only such set-up of cars and track in a private boarding school.

Jeff Schwartz, Steve Johnson,
Doug Shannon, Chip Jordan
Florida Central Academy,
Sorrento, Fla.

PLANE FACTS

I'm looking forward to the day when some of this car crazy enthusiasm dies out and you can make your magazine a well-rounded book of all models. Let's have stories on building planes and boats as well as cars. There's just as much challenge in piecing together a fine flying model as in making a little dragster any day.

Bob Sigmon
Portland, Ore.

FROM THE LEADER IN MODEL CAR KITS . . .



1. 1964 Thunderbird Convertible



2. 1964 Galaxie 500XL Convertible



3. 1964 Mercury Convertible



4. 1964 Buick Riviera Hardtop

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Light grinding, sanding, drilling and finishing is easy with this portable, battery powered power tool called Hobby Pal. Tool comes in a plastic case with several attachments for various operations. Standard size batteries fit neatly in compact case. Price \$4.95 postpaid (less batteries) from: Auto World, Box 961-M2, Scranton, Pa.

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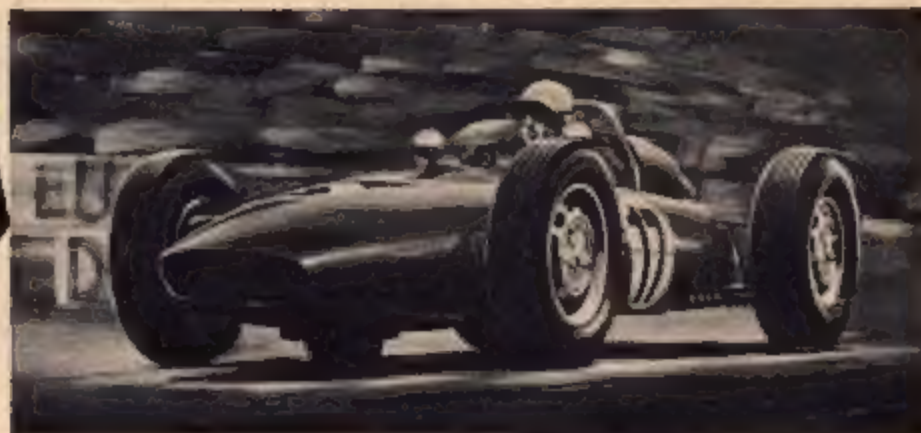


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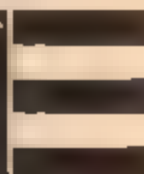


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model car COMMENTS

By Jim Keeler

THE '64 CARS are out, and you've probably chosen your favorite from the many makes and body styles (323 total) now available. As you look at the '64s, you most likely think of how you could customize or restyle the car that appeals to you.

Most of the time, model car customizers plunge into a job without thinking of what the end result of 30 or 40 hours of work will look like. Sometimes, the customized car is real sharp, but most customized models show the lack of pre-planning on the builder's part. Usually a couple of hours spent in drawing or sketching possible designs will result in a far better looking car. You can't draw you say! Then try modeling clay! By re-styling ahead of time with clay, you can come up with several ideas and change them until you settle on a final design. A rolled pan, a new front end or a different roof line can be obtained by shaping grease base clay with your fingers. Different bumpers or grilles can be tried out without even cutting any plastic.

To see how a chopped top or a sectioned body would look, try cutting up car folders or advertisements instead of a car body. When you find what you like best, then get out the tools and start cutting.

For those who want to learn how to draw cars, an excellent book is available for \$3.00. "How to Draw Cars," by R. H. Gurr, presents you with the basics of car illustrations. A list of materials you will need is provided as are many pages of experimental cars and motorcycles. Although the book was printed in the early fifties, it still provides some great customizing ideas. Write to Auto Books, 2906 West Magnolia, Burbank, California. Be sure and mention MODEL CAR SCIENCE.

Questions selected from the mail bag this month

I am in a frustrating position as I don't know how to make hinges for doors, trunks, etc. I have heard that you can make some out of paper clips, but how?

Jim Byrd
Guerneville, Calif.

There's a lot of valuable information on door hinging in the October '63 MCS.

Auto World of Scranton, Pa., also offers a new line of wire hinges with plastic retainers and complete instructions on how to install them.

I am customizing an AMT '49 Ford and would like to know where to find the following parts: gull wings; a '63 Cadillac engine; small plastic tools; lake pipes, and spare engine parts.

David Rixon
Edmonton, Canada

Gull wing doors must be hand made. A '63 Cadillac V8 can be obtained from Johns '63 Cadillac kit. Chromed 1/32 scale tools are included in Revell's Custom Car Parts Accessory Display Items (C1157). Lake pipes are in Monogram's '34 Ford. Spare engine parts can be found in AMT's Hot Rod Shop kits 03-002, and 03-003 and in Revell's C-1157 kit.

I have been building model cars for years now and have found that spray paint is easier and quicker, and usually does a better job. On occasion, I have found that my spray paint job turns out "fuzzy." Please tell me what I'm doing wrong.

Gary Graham
El Paso, Texas

You're probably holding the spray can too close to the model which results in "orange peel."

In the June issue of MCS, you featured Ginter's '33 Bantam Bomb. Is the body a cut down '33 4-door or just what? This is one of the wildest rods ever to come on the scene.

G. Bienvenu
Victoria, Austria

The Bantam Bomb is a standard American Bantam Coupe, vintage 1933. These bodies are usually chopped and used as competition coupes on drag strips.

Can you offer any ideas on painting cars that are black when you buy them?

T. J. Vance
Ashland, Ky.

I usually apply a base coat or two of white or light grey paint before spraying the first color coat. This makes the color lighter and brighter.

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AUGUST, 1963 — A big issue packed with easy-to-read reports on customizing powerplants, a survey of seats and part I of the building of the MCS X-1 dream car. Slot racers are still talking about our plans for a hill-climb track and the full instructions on making a full race Ferrari from the Strombecker kit.

SEPTEMBER, 1963 — More great cars and custom building tips. Part Two of how to build the MCS X-1 and a big survey of tires and wheels. Full reports on cementing and vacuum forming.

OCTOBER, 1963 — Information packed pages for every model car and slot racing fan. Pictures galore of championship cars. More valuable tips on independent rear suspension and hinging early Ford doors.

NOVEMBER, 1963 — Special coverage on the biggest National model contest winners! New techniques for better picture taking. Detailed report on fiberglass bodies and how to power them.

DECEMBER, 1963 — Buyer's guide to new models and accessories. How to make magnetic doors, drag chutes and short wheelbase roadsters. Differentials for slot racers, driving techniques and power for the 41 Willys.

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The Hobby Guide, 4513 Front St. New Orleans 19, La. Phone. TW 8-4607. Daily except Sunday 9-30 to 5-30 p.m.

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Ford Auto Speedway Track, home of Wm. B. Shatt Jr. 181 Brookwood Dr. Inkster. Mich. Races run on Friday & Saturday nights. 8-10 p.m.

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ville 12 Tenn. HO 4-lane track, plans for 1/32 & 1/24 to be built later.

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TRACK TALK

BY BILL SIPPEL

By the time you read this the big mail-in and drive-on-over races of the Midwest will have been concluded. The attendants of these events are traveling people, thinking nothing of driving 300 miles or flying 600 to take part. How many other hobbies or sports in the amateur class (racing for fun, not money) can boast such enthusiasm? When one hears manufacturers referring to slot racing as a toy or a fad, it seems they're looking at the frame and missing the picture.

Looking at slot racing at the recent Los Angeles Hobby Show, it seemed pretty disappointing. Manufacturers with displays were using a don't-you-dare-touch attitude (with the exceptions of Revell and Wrenn). There were a couple of rental tracks, but both were home-built and not maintained. They charged 25¢ a race. All in all, it was pretty grim for those getting their first look at slot racing.

Both Revell and Wrenn had tracks set up and let anyone try their hand. In fact, prizes were offered anyone who could turn a specified number of laps within one minute. However, there were no turn marshalls and if a car spun, the driver was out. All in all, I was disappointed as I'm sure others were — and the "others" were probably those who might have gone home with the new-to-them hobby of slot racing foremost in their minds. Too bad.

Two slot tracks were set up during the running of the Times Grand Prix at Riverside Raceway outside of Los Angeles. Eldon erected a tent — with an Eldon flag waving on high — and there was constant activity even during the running of the full-size main event! The other firm represented was — well, maybe we should forget it. I was with



Graham Hill when he was approached by a representative of the company under discussion and handed a card and a BRM body shell with the driver suitably mounted and helmeted. When Hill was offered a complete model, he accepted and was told the model would be actually given him the next day. The representative asked if Hill wanted a Lotus or a BRM. I'm sure Mr. Hill felt just a bit odd. I would have liked to have heard the pitch to Jimmy Clark if one was made. Wonder which model they offered him?

MCS is arranging for correspondents in all corners of the U.S., and at this writing I'm on the road, so to speak, (in the air might be better), to keep every one informed of activities. I'll have the chance to meet and talk with some of these people and at the same time see the slot racing activity in their personal areas. Rather than hobby dealers, I'll also be visiting with the commercial firms.

The commercial firms, manufacturers and their representatives, must cater to hobby dealers, club members, toy buyers, and everyone else who might be a purchaser or handler of their products. Therefore they must walk the middle line, at the same time staying on both sides of the road. There are many forms of racing and each group in their own way are just as enthusiastic as the other — although each thinks the other strange.

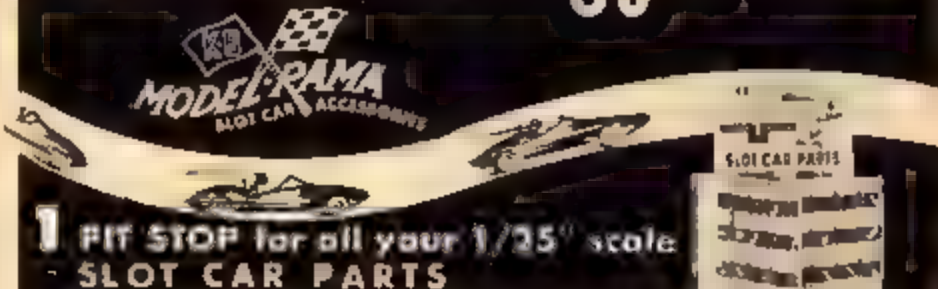
Looking at electric racing in the big commercial shops today we see that road courses — ovals and figure-eights — and drags are enjoying popularity. As for the cars, we notice that sports cars, GT and GP, jalopies, stock cars, Indy cars and drag machines are all going great guns. As for racing itself, there are in-scale events, out-of-scale events, organization, dis-organization — and every facet has some degree of following. Each group or faction thinks they are the only ones that are having the fun.

A friend recently proposed an idea that has much merit. I refer to it as a sort of get-together-auction. Many fellows have cars and parts going to waste in boxes stacked above the workbench. These items have fulfilled their need and, for a variety of reasons, are no longer required. In the get-together-auction such parts are swapped and bought — the latter at ridiculous prices (cheap, that is). Beginners can get started in slot racing at a fraction of the price they would otherwise spend. The growth of such activity could do nothing but give slotting a real big boost and even start new clubs. We felt this sort of thing is worth a real healthy boost. We'll let you know how it works out.

So, until next month

— Bill Sippel

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MCS' X-15 DRAGSTER

Convert The Plane Kit Into One Of The Wildest Drag Strip Machines Ever!



Completed version of the Revell X-15 makes a realistic model, but even *this* can also be turned into the wildest dragster yet!



Everything in the X-15 kit can be discarded except the pieces shown. Fuselage top will become *our*'s bottom.



Tips of the X-15's wings are sawed off according to the measurements given in the story. Follow lines precisely.



Wing flap area on both sides of fuselage is removed with saw following horizontal lines, molded into the plastic.

In the early days of quarter-mile racing, dragsters were often referred to as "rails," and they were often just that, lengths of tubing welded together, or an automobile frame with the body removed. Such simple, basic chassis carried little more than wheels and axles, an engine and a driver.

It is becoming more evident, as time marches onward, that dragster designers must look to the use of better streamlined body shells in order to lessen the wind resistance forces that are being encountered with today's bullet-fast speeds. Why, even the simplest form of streamlining can add several miles per hour to the top speed potential of a given car. And this is a pure case of "if some's good, more's better."

Today's speeds are necessitating research into true aerodynamic configurations, approaching shapes used in aircraft and missile work. Thoughts in this vein prompted us to turn to a model of the X-15 as the basis for a dragster.

Parts which will be used from Revell's fine model of this research vehicle are the fuselage halves, the front spear and the rear body ring. When the dragster is completed these parts will be inverted from the usual positioning on the plane.

The wings are to be cut so they will have a slight angle. A mark should be made on the leading edge section of the wing $9/16$ th of an inch out from the body, and another mark made on the trailing edge of the wing $13/16$ th of an inch from the body. Join the two marks with a straight line, cut through with a razor saw and discard the severed piece (repeat on opposite wing).

Now cut along the wing flap indentation line on each side and remove these pieces.

The racing slick tire and particular wheel to be selected (choice is optional) is placed alongside the body just behind the wing. Its width is marked off and the section cut out of the fairing. Repeat the operation on the opposite side of the fuselage, and on its top. Cut away the fairing in back of the canopy opening and you will be finished with the top fuselage half which is to become the bottom of the car.

Using the other half of the fuselage, or the top portion of our dragster body, scribe a line on the round fuselage section $3\frac{1}{2}$ inches back from the nose, then

Drag slick is checked for proper fit in opening provided. Wheel choice is up to car's builder.



Remainder of wing flap is secured from fuselage. Remember, it pays in the long run to use care when doing this kind of cutting to save later work.



Selected wheel and tire are held against fuselage and outline scribed. Area is then cut away so wheel will be inset. Repeat on the opposite side.



The section of the fuselage removed for wheel placement looks like this. For this kind of sawing, rub blade back and forth 'till it goes through.



make a second line $5\frac{3}{4}$ inches back. Cut out the fuselage portion between the marks to create the engine compartment. Check the space against the engine of your choice to be sure it will fit in, and if not sand or file additional material away where needed. Scribe a line $1\text{-}3/16$ th of an inch forward of the tail of the fuselage, and cut out the area for the driver's compartment.

Use two sides of Revell's Challenger I frame butted together as a chassis for the X-15 dragster. The front wheel we selected is a Halibrand mag from the Revell wheel accessory kit.

The engine to be used is left to the discretion of the builder, but because of the physical size of the car it is suggested that a large engine be used — as a blown Chrysler, an Allison, or whatever. Or, better yet, maybe two Chevys???

The parachute, necessary to slow down from the speeds that such a prototype car would be moving at the end of the 1320, can be pirated from Revell's Attempt I kit or by following information given on page 36 of the December MCS. The X-15's windshield is also from the Attempt I.

Fill all the remaining holes with putty, sand or file down unwanted ridges, and paint the car in your favorite color. Presto! An MCS original.

Razor saw opens up front of engine compartment by working along line. Any model may be used.



At top, fairing is being removed with saw from behind canopy opening. In photo above pencil lines indicate section of fuselage bottom (top of car) for engine.



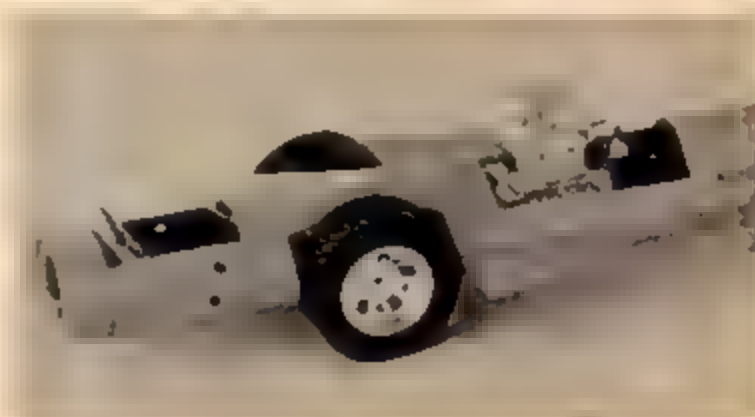
After engine compartment has been cut out, X-acto knife is drawn along edges to smooth them up.



Opening for driver's compartment has now been cut in to bottom of fuselage which becomes car's top portion.



The chassis for our X-15 dragster is taken from the Revell kit of Mickey Thompson's Challenger I.



Finishing requires dexterous use of putty and sandpaper, careful application of your favorite color.

COMPETITION COUPE -DRAG STYLE



Mark across rear of '40 Ford coupe body indicates where deck is to be eliminated in constructing this competition charger.

A competition coupe is a regular production line body placed over dragster rails with full engine set-back.

There are numerous models from which these coupes can be made. On this particular project, a '40 Ford was used. The body can remain stock with portions cut out, or it can be made into more of a show-and-go coupe. This one has the back end cut off at the trunk line and $3/16"$ in back of the trunk line cut again. After the pieces have been cut, saw along the chrome strip $3/16"$ back on the body. Cut the second piece off at the chrome strip. Now glue this piece underneath the body. Section $3/16"$ from the bottom of the car. Cut and file flat the sides where the pan will go. Major lines and handles must be shaved

and filled. The firewall should be taken out now. Nose section is a '40 hood molded in and cut for engine clearance.

Monogram's Sizzler frame is ideal. To give body a forward rake and give driver clearance to see, rail bars above steering were cut out and bars behind were lowered $1/8"$. At this point, frame can be painted and the front and rear ends can be glued in place. Front axle has been drilled for lightness. The tires are Revell's motorcycle tires and wire wheels.

The body as seen from above; rear deck removed. Square marked on body will be cut off for rollbar protrusion.



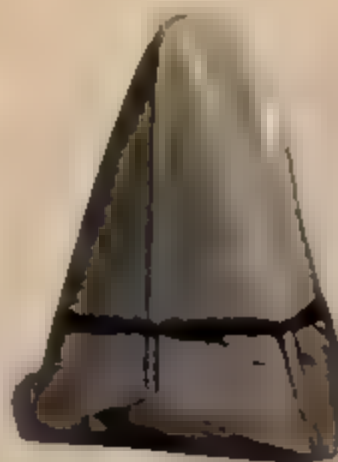


Coupe body sides have been marked for cutting around rear sides, and around firewall. Care used in cutting will save a lot of detail filing and sanding later on.



If you followed the lines properly, your '40 Ford body should look like this. It's always a good idea to save severed pieces for another project later.

Rear body pan is easily made by gluing strips of thick plastic or balsa wood to body sides. Final contours will be shaped by filing and sanding.



The stock '40 Ford is to be partially retained, partially discarded (cut is made along the line).

Rear portion of hood is glued to cowl in stock position. Caps are filled with putty and sanded.

Monogram's body section #49, available from hobby shop, is cut as shown with a razor saw.





Monogram's Sixzer Dragster frame halves are altered as shown. At upper left, pencil indicates where frame section is removed. At top right, vertical post is to be sectioned 1/8th inch. Finished frame side, in photo above, can be assembled.



Drawing above is of disc cut and sanded to fit within rear body opening. At right is the completed body after removal of simulated trim and all seams filled. Note rear push bar.

Wheel openings can be located now using Monogram or Revell slicks. Scribe around wheels chosen for the pattern making sure the openings are a little bigger than the tire. Now file and sand openings smooth. Rear wheels can be glued in place with Revell's disc brakes. Opening is then cut for the roll bar allowing the required room for the driver's entrance.

The Monogram dragster body section #49 should be cut straight along body top to let the body sit as low as possible. Belly pan should be used also.

Engine is Monogram's blown Chevy placed in the normal position. Check the body on the frame to see if it will align properly. If so, it and cowl can be prepared and painted.



MID-WEST SHOW CASE

**MCS UNEARTHS SOME GREAT
MODEL CUSTOMIZERS IN THE
KANSAS - MISSOURI AREA.**

A recent mid-West tour by MCS turned up a good many model builders in our vast mid-America area. Most of these displayed here were unearthed during promoter Darryl Starbird's great 31st Annual Kansas City Auto Capades. Starbird, no stranger to modelers, brought the week with Monogram gave a big show at the K.C. Auditorium over to the model enthusiasts to show their glamorous wares.

Gerry Lustend of Shawnee Mission, Kansas, put together this ultra-short street rod. Babbed frame is from Revell kit with components from Ala Kart model.



John Copeland from Dodge City, Kansas, won model car Swoopstakes at KC show with wild creation based on '61 Corvette.



Ace modeler Richard Sanchez started with a '30 Ford phaeton, turned it into this street rod in Dodge City.



Bubble-topped Special by Stanley Nepstrom began life as a '32 roadster, now boasts all-molded body and chromed 283 Chevy.



Jerry Sanchez has dubbed his startling rod "The Pagan." Engine is Chrysler, most of body is custom.



At left is another Jerry Sanchez creation, "The Prince." Basis was '32 Ford, with model plane nose.



Two Ford Deuce coupe bodies were combined into one glamorous street/strip sedan by builder Lufland.



Twenty five Ford T body, '32 windshield and grille, were combined into another fine Lufland model. Huge fuel tank sits ahead of shell



Dick Sanchez calls this ground-scraping tub "The Pauper." Car was a '30 Model A, uses Chrysler engine.



Customized '57 'Bird, still another Dick Sanchez entry, reveals sleazy fingers in the hand-painted, white pin striping.



Contrasting paint fogging by Bill Cadwalader shows how imagination can enhance even wildest body customizing.



Kansas Phil Zurbuchen started with a '23 Ford T, dreamed up this roadster.



"The Barracuda" a custom '49 Ford with all openings hinged, is candy blue.

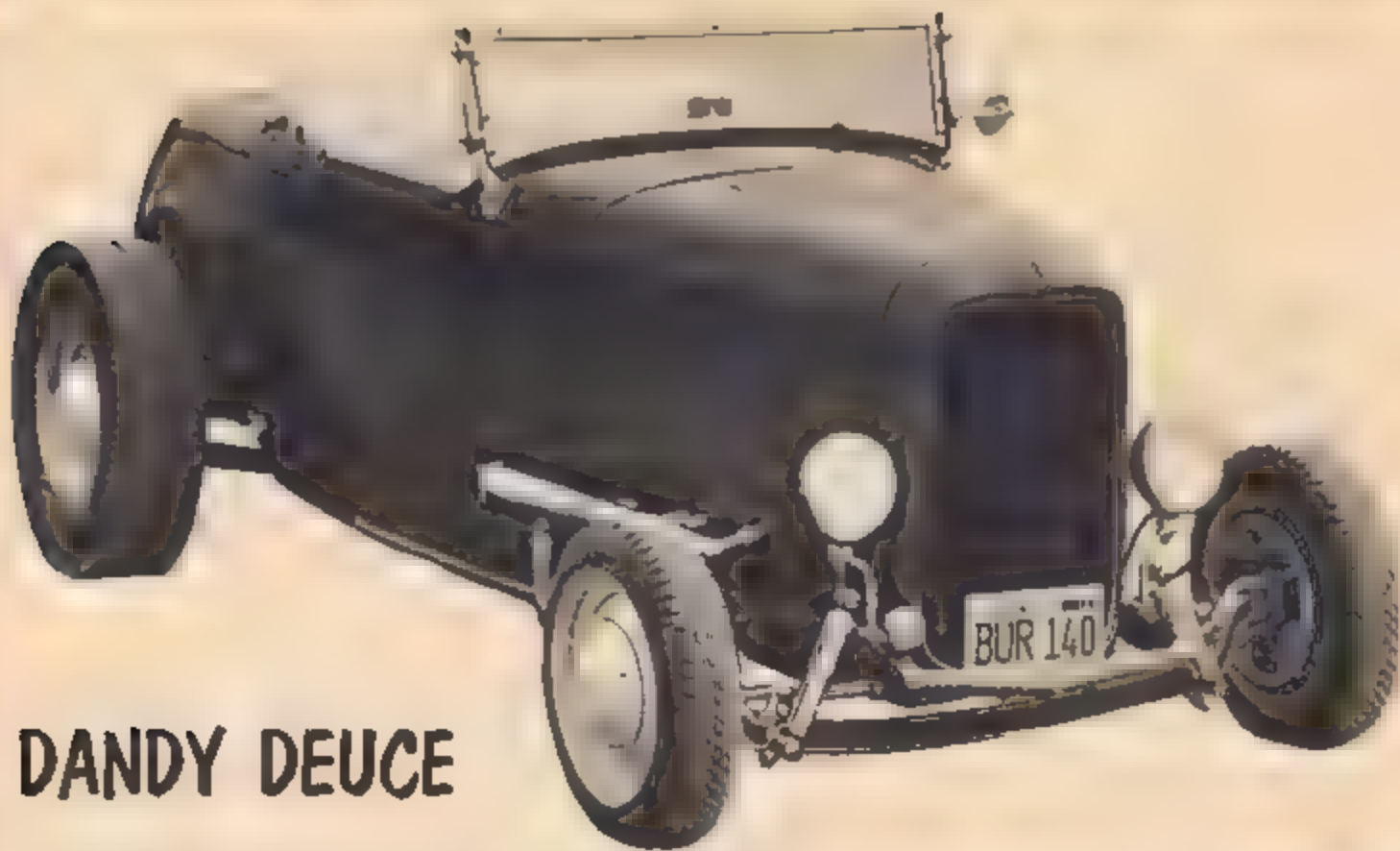


'60 Pontiac custom was assembled by John Findlay of Kansas City, Missouri.



GREAT CUSTOMS

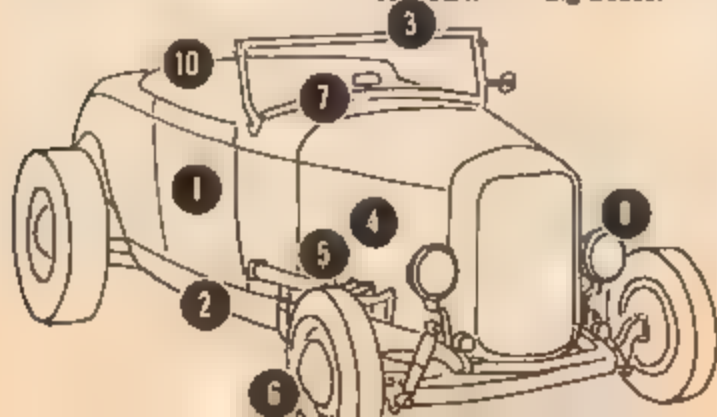
... AND HOW TO



DANDY DEUCE

An outstanding example of modernized '32 Ford roadster transportation is Dick Scritchfield's "hu-boy" street rod. Monogram's large scale "Big Deuce" lends itself to this adaptation very well and the modeler should have no problem in constructing an out-and-out great display that is large enough (at last) to really see! As there is no four-carb setup available in the big scale, Scritchfield's fuel drinkers will have to give way to Monogram's three or six arrangement. If you're ready, here's the breakdown

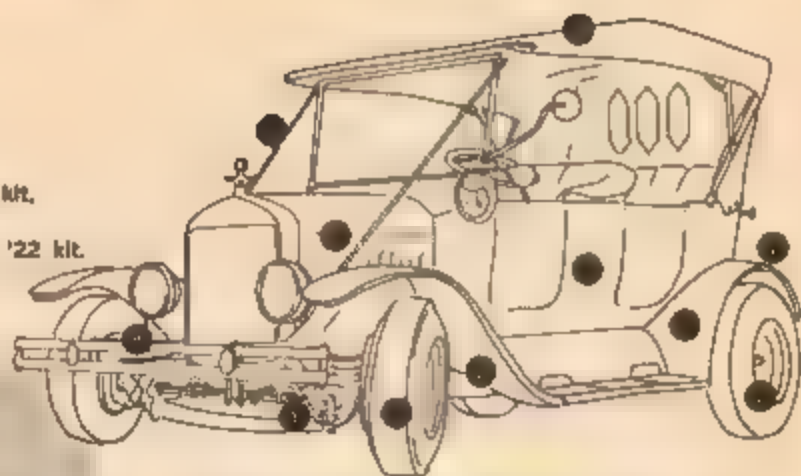
1. BODY — Monogram's "Big Deuce."
2. FRAME — "Big Deuce."
3. WINDSHIELD — "Big Deuce."
4. ENGINE — Monogram's "Big T" with three- or six-port carb setup.
5. HEADERS — Monogram's "Big Deuce."
6. WHEELS & TIRES — "Big Deuce."
7. DASHBOARD — Use flat plastic with instruments from "Big T or Deuce."
8. HEADLIGHTS — These and grille shell can be taken from "Big Deuce."
9. ANTENNA — "Big T."
10. SEAT — "Big Deuce."



and HOT RODS

BUILD THE MODELS

1. BODY — AMT '27 Touring Car.
2. FRAME — AMT '27 Touring Car
3. FENDERS — AMT '27 Touring Car.
4. TANK — Revell's Tweedy Pie.
5. SUSPENSION — AMT Touring Car.
6. TIRES — Revell's Big and Little Roadster kit.
7. WHEELS — Revell Mag wheel kit.
8. WINDSHIELD SUPPORT RODS — Aurora '22 kit.
9. BUMPERS — Ala Kart kit (Model A).
10. TOP — AMT '27 "T" Touring.
11. ENGINE — Revell's '57 Chevy.

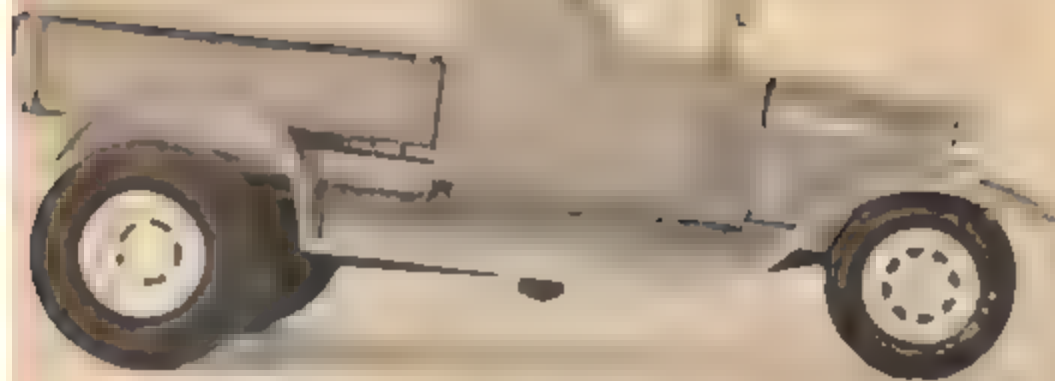


HONK!

With the popularity of touring cars growing every day, it seems fitting to add a miniature to your collection. This is a fairly easy model to build when AMT's touring car is used. A hole will have to be cut in the firewall for engine to be positioned. The only really difficult area will be in making the top. It will have to be made from two "Tweedy Pie" tops. If carefully done, this model will make a good looking addition to any collection.



Building The 'T' TRUCK



One of the most unusual looking rods to be seen at car shows recently is Larry Ready's '23 'T,' "The Milk Truck."

Kit to use for this model is AMT's '25 'T.' Their 'T' bucket has the rear portion cut off square 9/16 from back edge of the door. Mark distance with a wax pencil (available at stationery stores) then cut with a razor saw. Saw slowly since fast sawing builds up heat and tends to melt plastic.

Discard rear portion after removal. A small portion of the upweep remains.

Larry Ready's "Milk Truck" was built from AMT's '25 model kit.

After discarding rear portion cut from T bucket, the upweep should be filed level with the body. If truing is needed, do this now.



A notch is cut in fender floorboard assembly 2 5/8 inches from rear end of assembly. This allows pickup to sit flush on fender assembly.



Rear piece of cab has a small window, which is cut by drilling starting hole, then cut with a jeweler's saw. Or, it can be filed out with a half round file if saw is not available.

Next, assemble pieces made from flat scrap plastic which were cut out carefully from patterns shown at right.



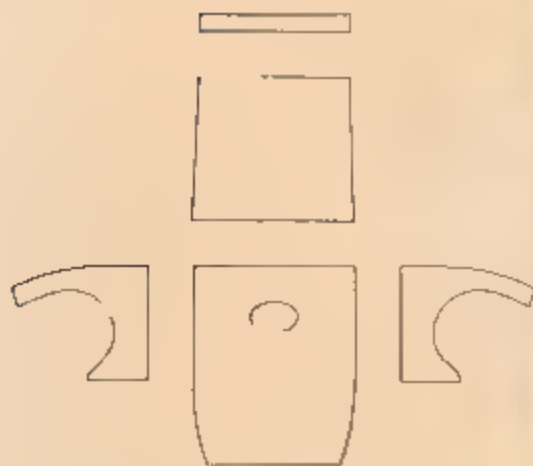
and this should be filed level with body. If rear portion of body needs truing, it should also be done now.

From here pieces will have to be made from flat scrap plastic (see patterns). Patterns are laid out on plastic and shape carefully drawn. Pieces are cut out roughly with razor saw and filed to finished shape. Pieces are used for back, sides, front piece over windshield and top. Rear piece has a small window (see drawing for size and shape). This can be cut by drilling a starting hole then cutting with a jeweler's saw, or it can be filed out with a half round file.

Assemble pieces to roadster body to form the cab of truck. First back piece is glued to body, next two side pieces are attached. Front piece is mounted between the two side pieces. Last to go on is top piece. It should be done only after other pieces have completely dried because it will have to be held in place along curve of top until glue is completely dry. Cab is finished except for windshield frame which is glued in at this time. Regular roadster windshield frame or Aurora's chrome windshield frame can be used. Frame is attached only to cowl of roadster, resting against the top.

The three locating pins on pickup bed are filed off so that bed can be set against pickup cab. A notch is cut in fender floorboard assembly 2-5/8 inches from rear end of assembly. This allows pickup to sit flush on fender assembly.

Model can be built as in the pictures by leaving off pickup bed.



For cab components, follow this pattern drawing. Pieces are used for back, sides, front piece over windshield and top.

Display Your Best

Creative thinking produces unusual display piece



Hardware store lawn sprinkler, less than \$1.00, is basis for this novel swiveling car display stand.

Here is a really unique suggestion; a project costing about a dollar and one which most modellers can put to good use. It's a swiveling car display stand that will permit you to show off that great model you've just finished to best advantage. The secret of the whole thing is a lawn/garden sprinkler from a garden supply store — this one costing 79¢.

Epoxied to the top of the brass, swiveling spray outlet is a plastic protective plate that hardware stores sell for keeping dirty hands off wallpaper. You will note that these plates have a sizeable rectangular hole amidships, so this can be covered with thin wood or cardboard, and onto this is fastened a piece of material from the Revell Interior Customizing kit. The material is adhesive-backed, but added strips of tape help retain it and at the same time provide an outlined area for your car to sit within. Build one as a winter's evening project.

Revell's Interior Styling kit contains felt-like material for base of this inexpensive project.

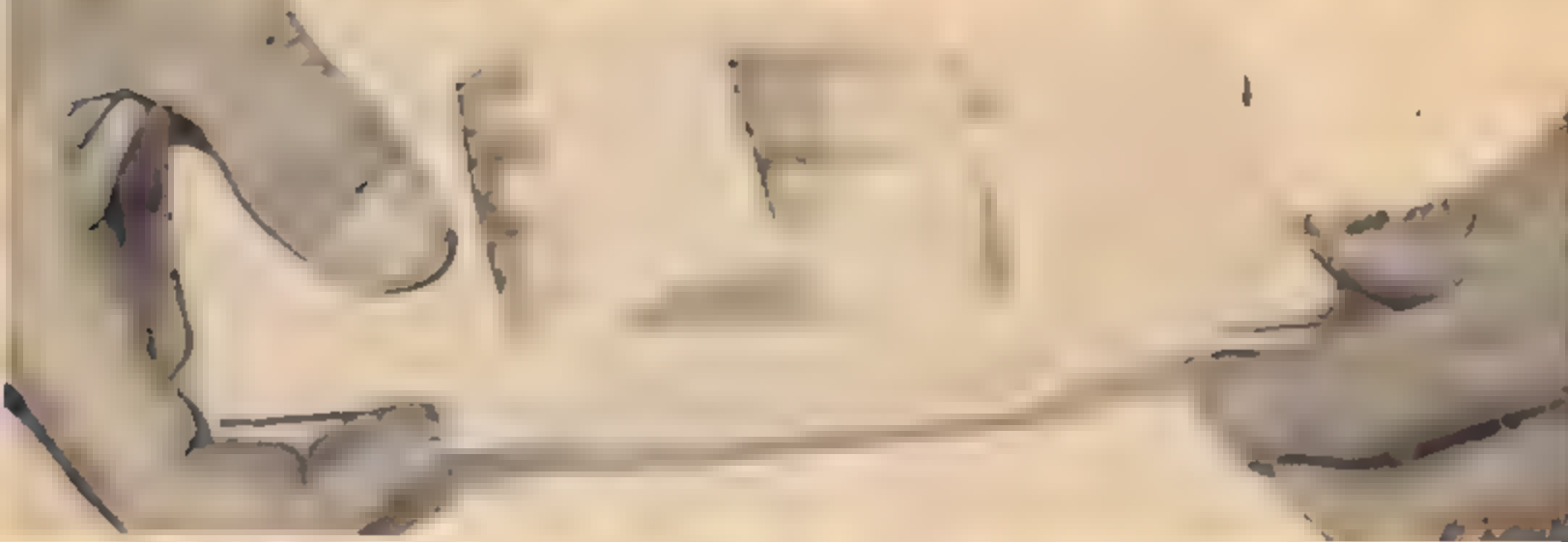


Clear plastic piece is protection soil switch cover from hardware store, with cardboard over opening.



Thin tape helps hold felt to cardboard on plastic, also provides rectangle to set car within.

SUN ROOFS-SLIDING



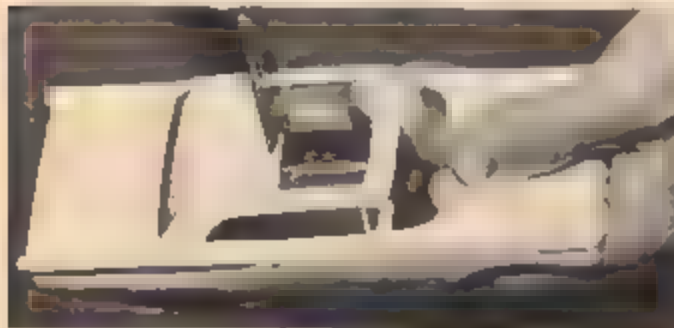
A REAL CUSTOM TOUCH. SLIDING SUN ROOF CAN BE CUT INTO TOP OF NEARLY ANY CUSTOM HARDTOP IN A FEW MINUTES.



Mark opening outline carefully with a pencil. The opening should be no larger than shown so glass will go out of sight.



Work the X-acto saw back and forth with pressure until blade goes through plastic. Then proceed to cut on drawn lines.



Hold the window insert in place and cut the window as shown in the photo. Window edge should be flush with roof edge.



Now the edges of the roof opening can be finished off with file and sandpaper. Be certain lines are straight.



Using the window insert as a pattern, cut out the side runners as shown. Scrap plastic or cardboard can be used.



Cement the runners to the window insert. They must be firmly installed as they are the sole support of the window.

STYLE

Show judges always give extra points for novel ideas — here's one that'll show 'em some class

The sliding sun roof is a new and unique idea for the modeller who feels he's used up all the normal tricks in the bag. And not only is the idea novel, but the fact that the transparent "glass" covering actually moves will add considerable judging points in the next car show. Thus, this sliding sun roof can be categorized right along with opening doors, deck lid and trunk. The project is really quite simple, and will provide the builder with an interesting hour's work some cold, winter evening. As usual, care, forethought and attention to details will spell success.



The window is a piece of clear plastic. To add a custom touch, tint the window with a light candy color coating.



The finished installation from beneath. Be sure the cement does not interfere with smooth sliding action of window.



Mother's Worry —NEW MONSTER FROM REVELL

Stand back . . . here comes another monster on wheels. And who else but Ed "Big Daddy" Roth could come up with such a lovable horror as "Mother's Worry?" Riding in a wild '23 T roadster, this monster has a movable arm and hand that can be swiveled for various positions. Included in the kit are customizing eyeball decals, a "bullet-proof fly" and metal axles for the car. Parts can be swapped with the first Roth custom monster, "Mr. Gasser," for some far-out customizing. It may be hard for some to understand, but, without a doubt, the monsters are here to stay.

McMODEL the MASTER BUILDER

YOU'RE NOT SERIOUS ABOUT CHALLENGING **DIRTY McPOOL** TO A SLOT-RACE, ARE YOU?

SURE, NEXT SATURDAY!

BUT HE USES EVERY DIRTY TRICK IN THE BOOK! WHY HE---

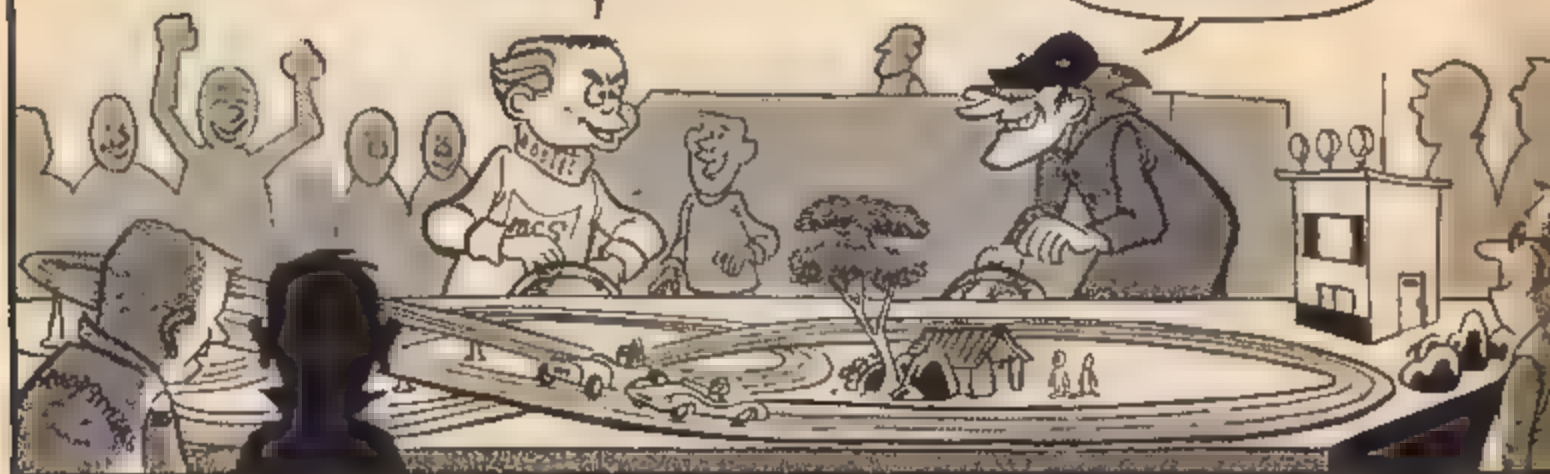
I KNOW, I KNOW, BUT I HAVE A SECRET WEAPON!



RACE DAY

YOU'D BETTER FORFEIT, McPOOL—I KNOW ALL YOUR TRICKS... YOU CAN'T WIN THIS TIME!

NYA, HA HA! I'M NEVER OUT OF DIRTY TRICKS!



HEH, HEH, THIS STUNT'LL GET HIM! I'LL SHORT OUT HIS BATTERY WITH THE STEEL-SOLE CYCLE BOOTS!!



THIS'LL FIX 'DIRTY' McPOOL'S SHORT-CIRCUIT TRICK!

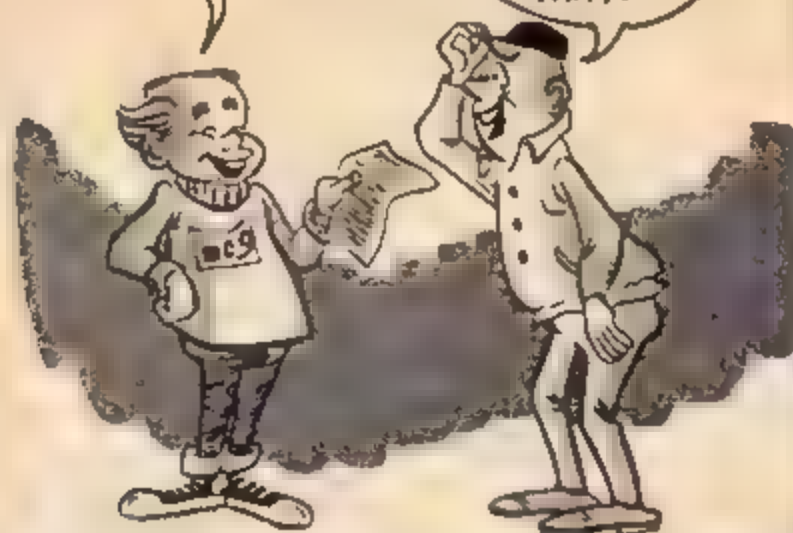
NYA, HA HA! THE PHANTOM BOOT STRIKES AGAIN!



THIS 'SCOUTING REPORT' I'VE COMPILED
LISTS ALL OF MCDOLL'S DIRTY RACING
TECHNIQUES - F'R INSTANCE HE ASKS QUES-
TIONS TO DISTRACT OTHER DRIVERS AS THEY
GO INTO A CORNER - HE GREASES THE
OPONENTS TRACK - WIPES YOU OUT ON
THE CORNER AND ETC... ALL HIS TRICKS
ARE RIGHT HERE, IN BLACK AND WHITE!

ARMED WITH THIS INFO
I'VE GOT IT MADE!

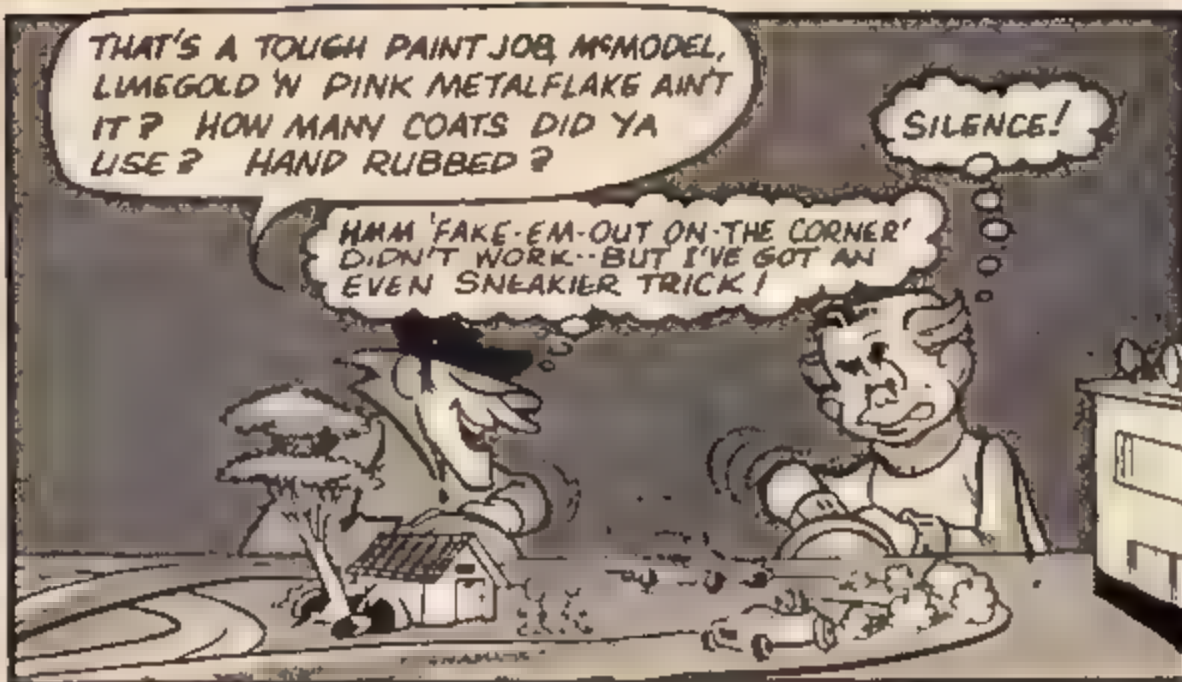
GOLLY, I NEVER
THOUGHT OF
THAT!



THAT'S A TOUGH PAINT JOB, MCMODEL,
LIMEGOLD 'N PINK METALFLAKE AIN'T
IT? HOW MANY COATS DID YA
USE? HAND RUBBED?

SILENCE!

HMM 'FAKE-EM-OUT ON THE CORNER'
DIDN'T WORK--BUT I'VE GOT AN
EVEN SNEAKIER TRICK!



E-E-E-YOOWWW!!!



MCMODEL SALUTES

7th FUTURESTICS

WHITESTONE, N.Y.

7th MAD MODELERS
OF ONTARIO, CALIF.

7th CUSTOM KIDS
OF GENESEE, IDAHO

7th GHOSTERS
OF HARTFORD, MICH.

have you registred your
club with MCMODEL SALUTES?

Do it today!!



MCS

CONTEST WINNERS

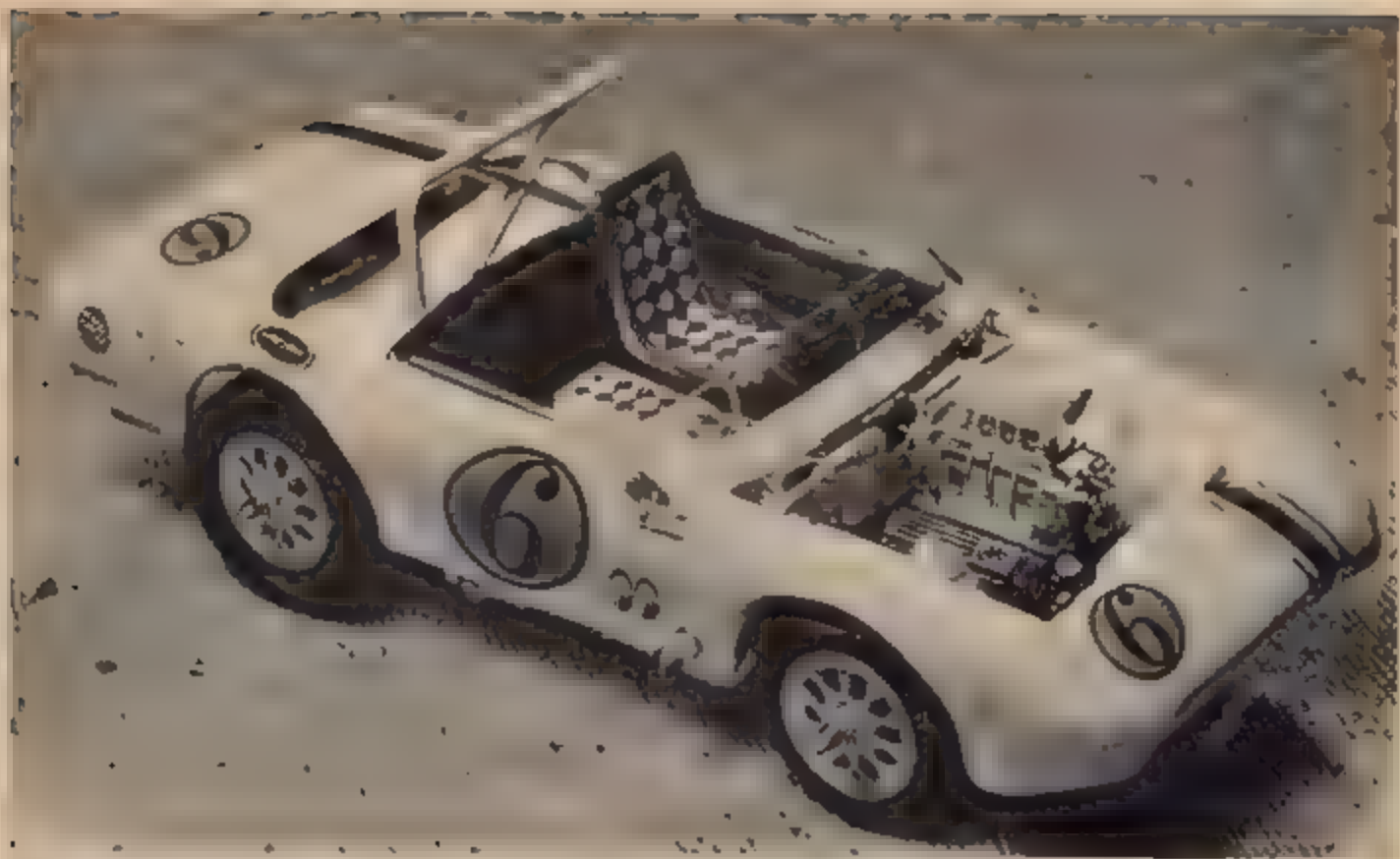


First prize and a \$25 Savings Bond to Rick Harris, Nashville, Tenn., for his '40 Ford Coupe. This champion has molded fenders and body. Finish is candy apple red over metallic blue with a dark candy blue stripe down the center. Door and trunk are hinged and driver's seat swivels.



Starting with Revell's '56 Ford pickup, William Landis, from Allentown, Pa., first removed the cab rear section and built up the cab extension from balsa wood. Using plenty of body putty and sheet plastic, Landis finished his "Sweet Chariot" with a dark, metallic blue paint.





Sectioned and channeled by Mike Benesch, from Lima, Ohio, this 1963 Chevy II Nova SS also has a blown 421 Pontiac V-8.



Built by Robert Stevens, Aurora, Colo., this model features a Flat Body, 2 Chevy engines and workable front wheels. Paint is metallic gray. Frame is from AMT dragster kit.





From Bedford, New York, comes this '61 Corvair Monza styled by John Van Allsburg.



Sacramento, Calif., modeler, Richard Salazar displays his customizing talent on a '40 Ford.



A fully detailed, Chrysler engine powers this dragster with a '25 "T" body.



Starting with an 4MT '32 Ford pickup, Wesley Roy Barneklow topped it off with a T-bird engine.



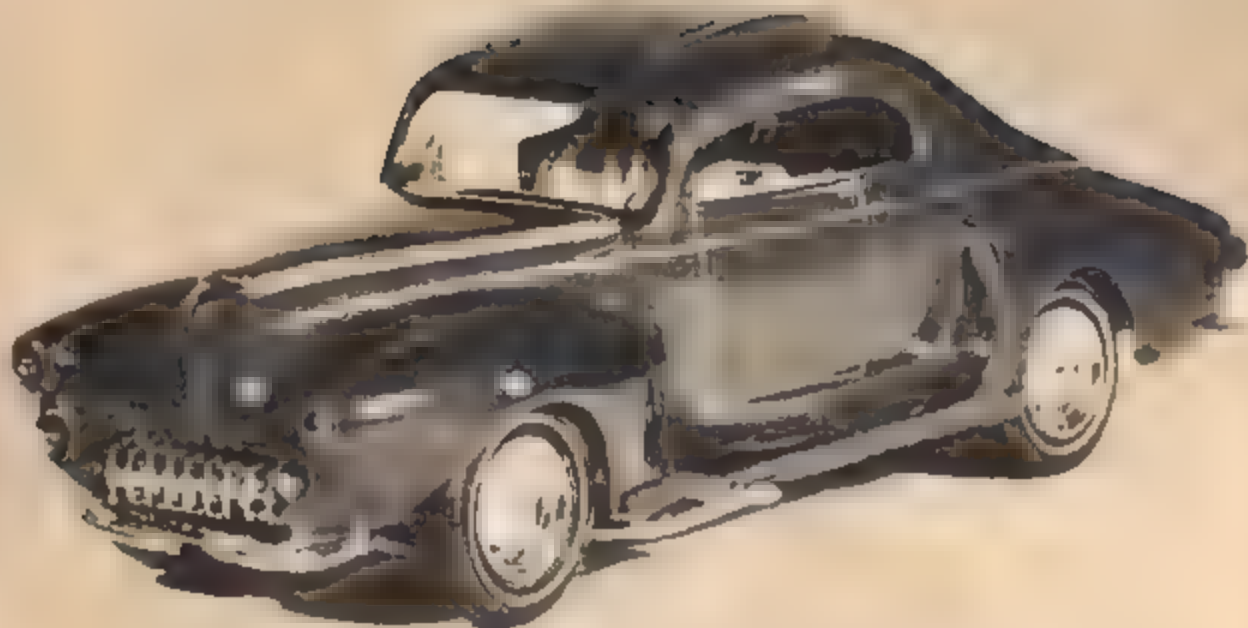
Robert E. Ramos, from Las Vegas, Nev., sends this double entry: a '63 T-bird and a '36 Ford, both modified for show and go!



This '60 Chevy Impala convertible from Sheldon Cousins features a '62 Lincoln custom half top.



From Sydney, Australia, comes this entry created by Rod Mockenzie, using nine different kits.



WALTER WILLIAMS REWORKED THE TOP BODY HOOD AND FENDERS TO CREATE THIS CUSTOM '40 FORD



Powered by a '58 Chevy engine, this '40 Ford was customized by Andy Miller, Highspire, Penn.

a MODEL CAR SCIENCE Contest

FOR MODELERS
EVERYWHERE . . .



Each month the editors of MCS will select, from PHOTOS submitted, the top model car. It will be shown on these pages and its owner will receive a \$25 U.S. SAVINGS BOND

SEND A PHOTO OF YOUR PRIZE MODEL TODAY TO:



MODEL CAR SCIENCE

Contest Editor

171 So. Barrington Pl.

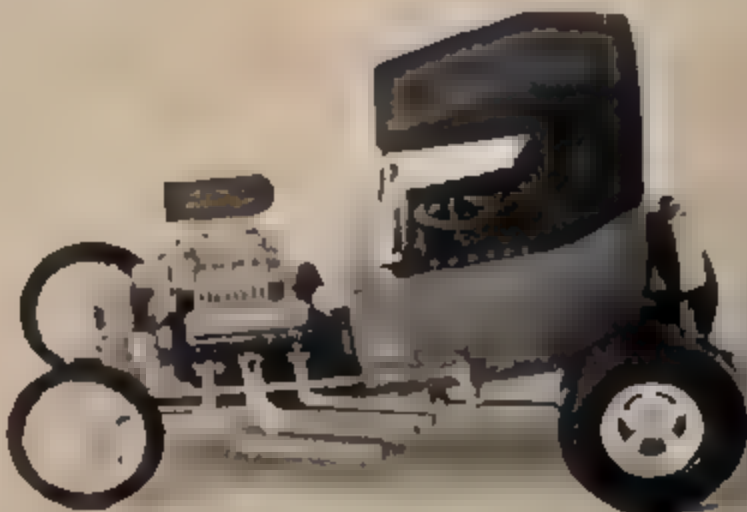
Los Angeles 49, Calif.

You may submit as many entries as you wish. Send photos only, please. NO KITS include your name, address, age and information on how you built the model. Only CAR models are eligible. We cannot return any photos submitted.

ROADSTERIZING YOUR 'T' COUPE



This roadster was built from a discarded "T" coupe body by first taking the body cutting all way around it just under the molding line.



The completely molded-in body is made by filing off all detail and door indentations are filed and sanded smooth.

Frame from AMT "T" can be painted and used, or Revell '23 "T" roadster frame (C1128) or the chromed tubular roadster frame (C1127) may be employed for assembly.

Wondering what to do with that discarded "T" coupe body, why not make a roadster out of it?

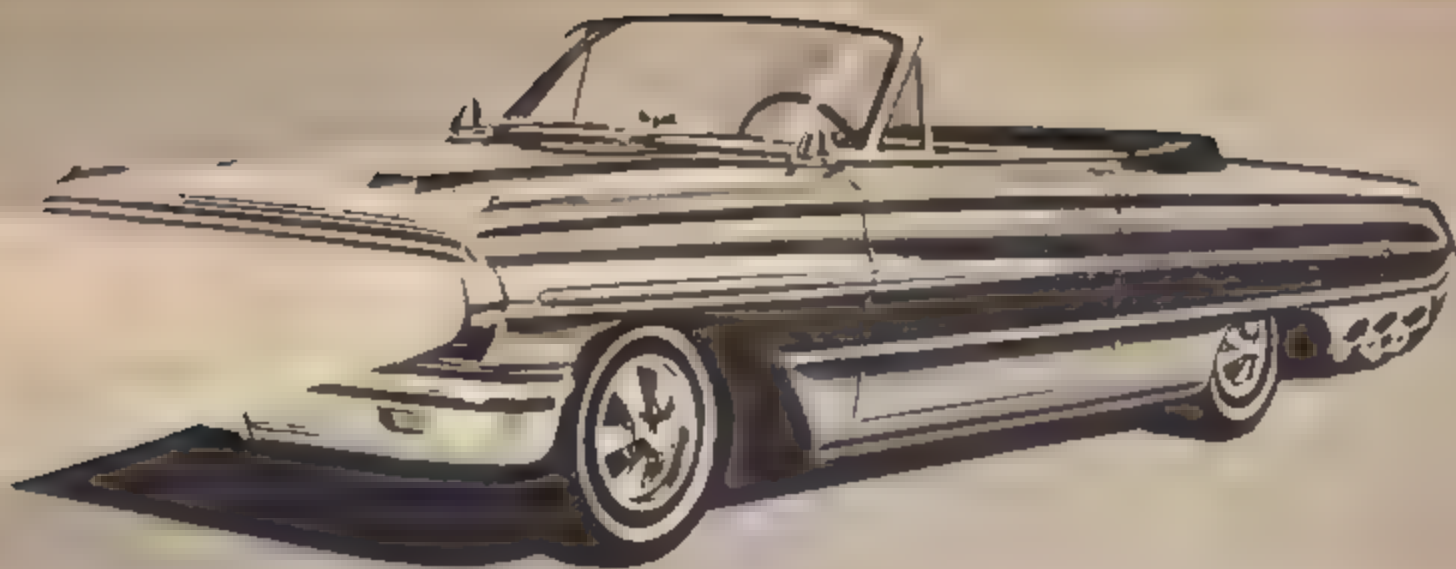
Tools you will need are: a razor saw, files, glue and putty.

First take the discarded body and cut all the way around it just under the molding line. This is done to square up the body. From here the roadster may be built in two ways: either as a regular roadster with opening doors and leaving the body detail, or as a completely molded-in roadster. If you wish to build it with opening doors and trunk you can refer to the article in the October MCS "Hinging Early Ford Doors."

Should your desires run toward a molded-in roadster all detail should be filed off and door indentations filled and sanded smooth. Rear deck can be molded to body by filling with putty and sanding until you have a gentle rounded contour joining the body and deck.

Frame from AMT "T" can be painted and used or Revell '23 "T" roadster frame (C1128) or the chromed tubular roadster frame (C1127). If you use AMT's frame, the Revell roadster chassis speed equipment (C1132) really looks sharp. Some of the parts may have to be modified slightly to fit the AMT frame.

The big and little roadster tires and wheels kit (3001) would go great on this car. We're leaving the engine and paint choice up to you, but a nice chrome engine and a candy or pearl paint job would really finish it off.



HEADLIGHTS in a KIT

AMT'S '64 LINE-UP FEATURES A MAJOR BREAKTHROUGH

One of the most important developments in car models for 1964 has been announced by AMT in conjunction with their new kits. For the first time a 1-25th scale kit will offer headlights and taillights that operate.

First of the AMT cars to be offered with the new lights is the 1964 Ford Galaxie 500 XL Convertible. The 3-in-1 kit features the restyling of Gene Winfield which lets the builder create a Daytona racing version of the 500 XL with an off-center styling theme, square head lights and Winfield's own custom wheel design.

Even more smart '64's are pouring off of the AMT assembly line. Two of the most exciting are the Buick Riviera and the Ford Thunderbird. The Riviera 3-in-1 kit, also restyled by Winfield, has stock, custom and rally versions. The latter features four Weber carbs, Lake pipes racing mirrors, custom exhausts, fog-type manifold and a rally board and plaque.

The Thunderbird, with customizing by the Alexander Brothers, has two complete tops, authentic replicas of the "Italian" fastback and "Italian" clear tops made famous on the Ford dream car. Also included in the kit accessories are a wraparound rear seat and unusual new bumpers and grilles.



'64 Buick Riviera kit has custom exhausts, rally running lights, wild seat headrests.



Restyled '64 Thunderbird features dream car top in either clear or fastback versions.

HOIST THAT ENGINE

Here is a modeler's display that tells a story. Actually, your imagination can run rampant here for life-size counter-parts exist in countless shapes and sizes. The subject at hand is an engine hoist — or, as it is known to hot rodders, an A frame. Our example was built in an hour with an outlay of only 60¢ for the gears procured from the slot racing shelf of our local hobby dealer. The rest of it came from the scrap box, using the plastic "runners" from which the parts of previous car models were separated. For a chain we used part of a little girl's locker.



Collect pieces of "tubing" from the plastic runners in the scrap box. Select those that are round with about 1/8-inch diameter.



Carefully file shaft ends so slot car gears will have a force fit to prevent slippage when hoist is actually used.



Legs should measure about 3-3/4" long, upper cross shaft about 4", gear shaft about 5-1/2". End plates are 1" wide.



One end plate, cut from plastic sheet or cardboard, will have a single hole, the other two. Be sure all holes align.

Close-up of final gear assembly. As this hoist actually works, a car display can be arranged with engine hanging above hoodless car at any elevation. Different? You bet!



TABLE TOP RACING SECTION

PHOTO CONTEST

valuable prize for the reader who submits the best photo to
the racing section. Send your photo to:

Ed Skelton
Model Car Science
1771 Barnhart St.
P.O. Box 1111

THIS MONTH'S PHOTO CONTEST WINNER IS
ED SKI of HADDONFIELD, N.J.

**M
C
S**



TRACK TEST

LIONEL

Beginning an informative series; actual track tests of slot cars — how they go, how to make them go better, how they compare, and a complete technical analysis of every brand of car manufactured. Taking one make car at a time, MCS opens the series with the 1/32nd scale Lionel cars.

CONDUCTED BY BILL SIPPEL

The basis of this new, regular series of actual road tests of the various brands of slot cars will be a comparative set of figures and data — showing the car as it performed right from the box, showing how the car compared with minor easy-to-do modifications, and a final rundown on its capabilities after all-out alterations. This will allow the reader to not only see how much better each individual make can be made to perform, but will permit him to compare all the currently available makes by saving each month's rundown and referring back to each at a later date.

The whole idea is for the benefit of people who either own the make of car



under discussion, or those who may contemplate buying that make. To assure a fair comparison between cars, every car will be run on the *same* lane of the *same* track, and each will be driven by the *same* driver. Incidentally, the track is a custom built course rather than one of the ready-made factory tracks which could give an edge to the same-make car designed for it.

Our guinea pig this time is the new Lionel 1/32nd cars, the Ferrari Testa Rosa and the Corvette Sting Ray, each with a retail selling price of \$4.95. In the Lionel line-up there are also Grand Prix cars as well as other sports models. The Testa Rosa (no real car of this configuration ever existed, the model being a combination of two prototype Ferraris) is somewhat larger, and the Sting Ray smaller, than the advertised 1/32nd scale. If your club group has fairly board tolerances on scale, both cars can

compete with other 1/32nd machines.

First, let's look at the construction merits of each car. The wheels are nylon and of the Scalextric type and, in fact Scalextric tires fit them very well. The gears are brass pinion and nylon crown and have an extremely smooth mesh. Rear axle bushings are a nice slip fit, very important in eliminating bounce and chatter. The motor is of Airfix design with disc commutator and three-pole armature with twin magnets. It is held in position by locating lips on the bottom of the body and by an extension pin on the upper body half.

Pickups are tension-loaded for contact and the guide is a pin rather than a blade type. The front axle floats up and down, therefore the pickup system is of the sled type; the pickups support the front of the car rather than the tires that merely go along for the ride.

These cars were simply taken from a

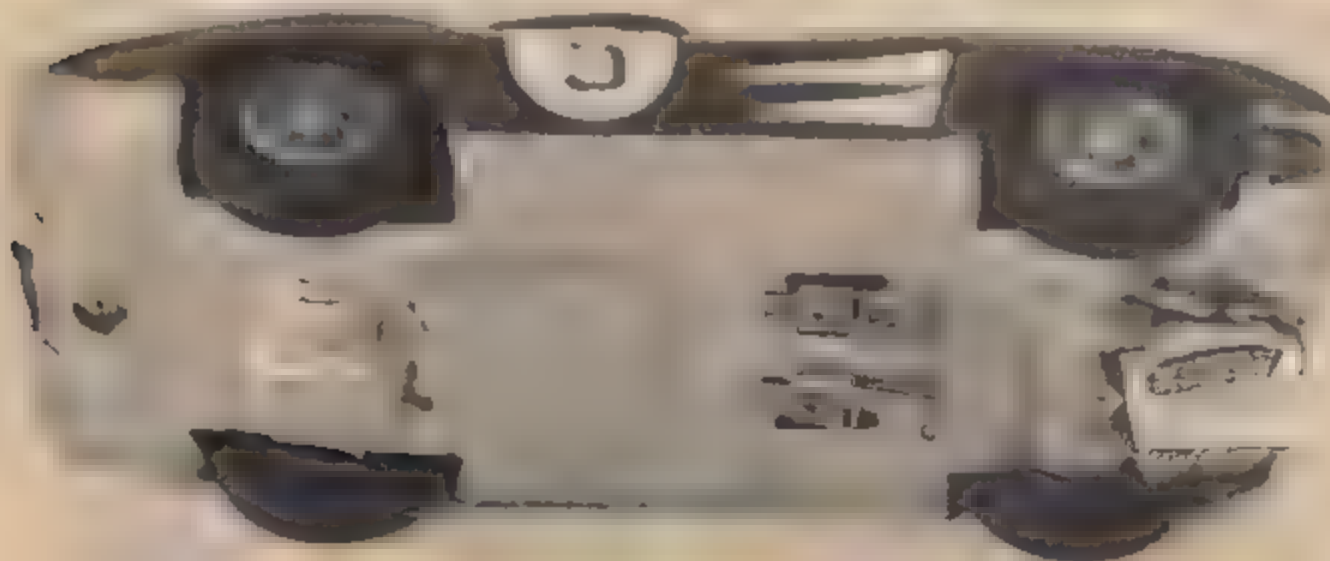
dealer's shelf, rather than being factory-supplied which could result in our being shipped cars especially prepared. But by buying them over the counter from a hobby shop, without the dealer aware of the use to which the cars are to be put, we were assured of receiving exactly the same model that you might buy.

Our first problem came with pickups. Running on a home built course under the International rules such as MCS test track is, we did not mate. We soldered some braided wire tabs to the stock pickups, running inward to meet the track contacts. This can be done in a few minutes time at home and will not interfere with the cars usage on the home factory track. (When doing the soldering remove the pickups because of heat near plastic.) It did not change the operation of this type system so our first tests were conducted in what would be considered an unmodified state. Let's



Lionel's 1/32 cars are the Ferrari Testa Rosa (left) and the Sting Ray. Ferrari is a little larger; Chevy smaller than scale.

Main test car was the Sting Ray. Major alteration brought on from test results was addition of normal guide (below).



say we were impressed. Wheels, axles, tires and gearing were so good that the cars ran very smoothly with no modification needed in this department. It is our desire to find ways to eliminate bounce, help handling etc. *without* adding weight. Weight is not really a good way to improve a car, but rather a way to hold it (no bounce) on the track. These cars run smoothly without bounce, without weight, in stock form. They were quite fast and when we got into the turns our troubles started.

In a fast turn the car would tilt or two wheel (slightly top heavy and too much side tire bite) and leave the slot

I might hasten to state you could drive at a relatively fast speed through the turns and still hold on. However we want to get through the turns as fast as possible. A quick check showed the guide pin to be very short, just penetrating the slot and not taking advantage of the 3/16" allotted depth. Taking pliers the guide pin was pulled down as far as possible without its wobbling in the chassis. This nearly gave us the full depth. Back to the track and although still two wheeling it stayed in and in fact you could now hold the slot well enough that side tire bite, top weight and the tripod contact (rear wheels and

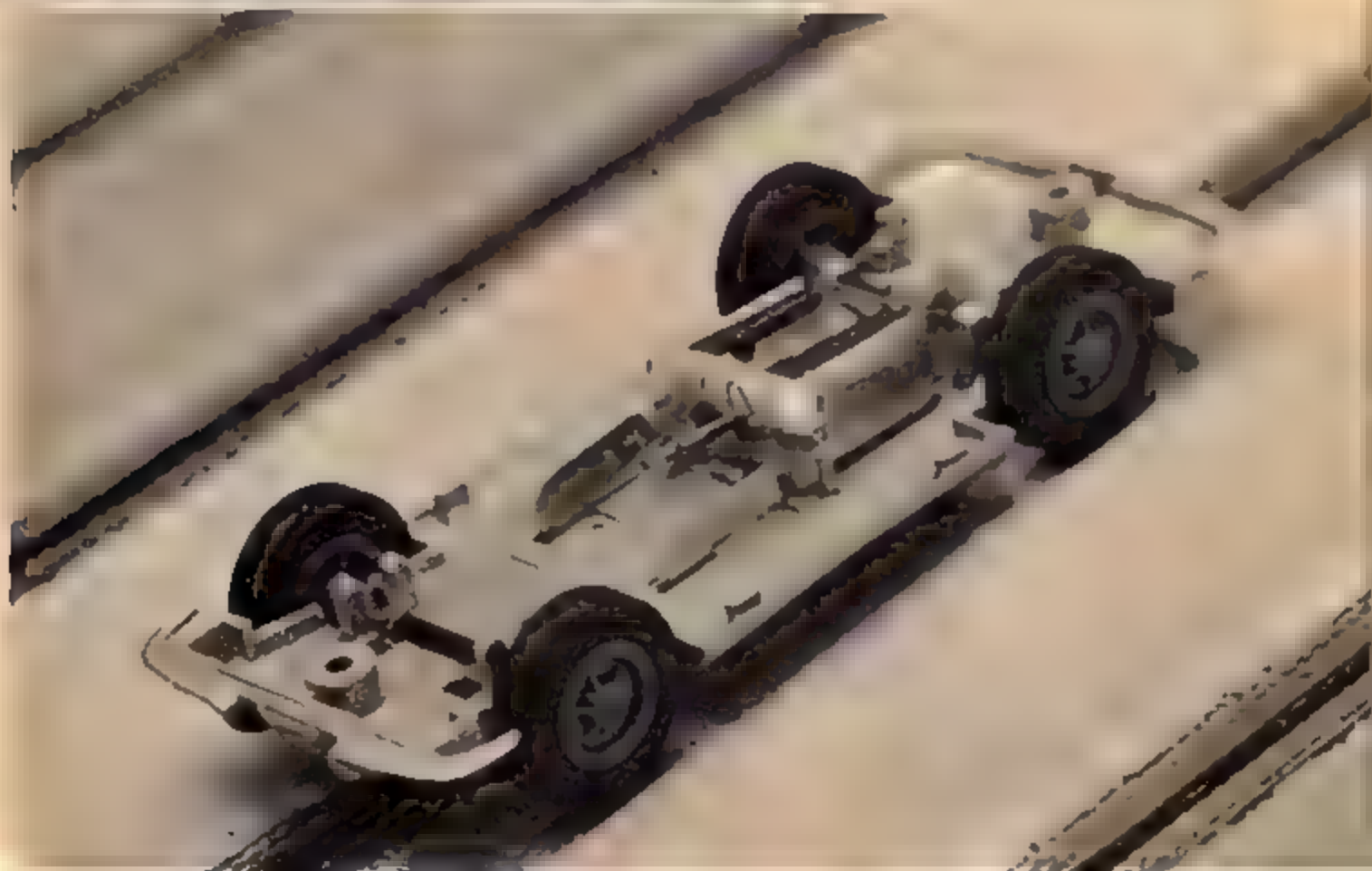
front pickups) would roll the car if driven too hard. Times decreased considerably.

We also found another problem solving itself. On two wheeling we would prefer to change tires to drift a little rather than add weight if at all possible. This was to be our next move. However tire wear had reached a point of crust and flash removal and the car started to get its drift and stop the drastic two wheeling. Times dropped a little more. If you incur tire troubles you can't solve you might try Scalextric or re-shaping the existing ones. There are two dia. available also for testing.

You can of course change to aluminum wheels where a wide range of tires are available. However from the standpoint of roundness, the present wheels are very good. With the car still lifting a little rather than a tire change we felt we would tackle another problem and see if that didn't handle them both at the same time. This is a problem that happens to all cars that run guide pins. When you lay out too far in a turn you

Pins extending from the upper half of the body shell hold the front axle and the motor in place. System allows the front axle to float up and down.

Stock chassis before guide shoe modifications has sled-type, tension-loaded metal pickups that cause front wheels to ride above the track.



lose contact and there you sit. In fact as around 90 degrees you can be shorting the track and motor if you are holding your controller in an on position. Therefore we made our first non stock modification, inserting a guide shoe.

A hole was drilled between the body mount hole and stock guide pin to 3/16" dia. and a brass bushing pressed in. Then a guide was inserted. The wires from the guide were fed through the existing holes for the stock contacts (already removed). The other end of the wires were spot soldered to the copper motor brush contact plates. The stock guide pin was removed. This modification does in no way alter the car and the blade pick up can be removed and the stock unit reinstalled within a minute or two, or visa versa. With the blade we now had the front wheels supporting the weight of the car and of course this allowed the nose to be lower to the ground. It also stops the tripod action and flattens the two wheel tendencies. Back to the track and BOY!! — hit the turns harder and never a loss of power. Also with the front wheels supporting, the lifting disappeared. We had now reached the stage where the car would be semi competitive with hand built cars. We are now talking of tracks that are drivers courses and cars that are scale within reason. It does not mean you could tackle a brute motored machine on a course with long long straights.

We called it quits here, had a good running, handling car. We do not wish to leave the impression we have developed a winner, but it is a competitor.

As you can see it is of little added expense to make the non stock modification, under \$1.00. We know of other things that could be done and so do you (example, through MCS tips). However to go to detailed parts modifications would run the car out of its own price range and intended goal, a fun, high production, low cost unit. In all cases timing was done on 3 lap times and divided for an average per lap. This eliminates the lucky hot lap and gives you the consistency you must have during a race.

By studying the increased lap time during our testing, it can be determined that with the three cars in the same ten lap race, the long pin car would lap the short pin car during the sixth lap. The blade-equipped car would lap the short pin car during its fifth lap and the long pin car in the eighth lap. Looking at it from this standpoint you can see we have nearly doubled the potential of the car as it came in the box.

If the reader would like to see other factors checked, tested and considered in this road test series, let us know.



Sled type original metal pickups are shown above with addition of braided wire tabs for better contact. Further modification to standard guide shoe necessitated new contacts to motor with soldered wires (shown below).



LIONEL

Tire diameter

Gear ratio (9-36 64 pitch)

Wheelbase

Track width

Total car weight

* * * * *

Lap times: (average of 5 lap runs)

Stock

Pin lowered

W/guide shoe

Testa Rossa

Sting Ray

1"

15/16"

4 to 1

4 to 1

3-1/16"

3"

1-5/8"

1-5/8"

2 1/2 ozs.

2 1/2 ozs.

11.12 secs. per lap

8.7 secs. per lap

7.6 secs. per lap

SLOT RACING IN THE MID-WEST

**A close look at a
championship track**

Equipped with electronic, automatic lap counters, lap timing clocks and lanes wired for electric brakes, the Keenecraft Hobby Center road course in Kansas City, Missouri, also features long straights, tight turns, banked curves and an exciting over-under.

Spending much time and money in the construction of racing facilities for selective membership only, Keenecraft operates on National Rules set up by the Southern California Hobby Industry Association, and adopted by the Hobby Industry Association of America.

Keenecraft owner, Harry Hamilton features racing nightly on his 4-lane, custom-built track for 1/32nd scale cars. For fast, big scale, auto racing at its very best, Hamilton's 1/24 - 1/25th scale four-lane Big Eight track is over 80 feet each lap and has long straights with big banked curves.

Rising to the challenge of this track, members of the racing club have created some slot cars claimed second-to-none. Club president, Dale Titus tells MCS that a very strict set of house rules have been established to encourage serious racing enthusiasts and discourage home-play.



ABOVE: All Keenecraft race lanes are equipped with electronic, automatic lap counters & lap timing clocks.



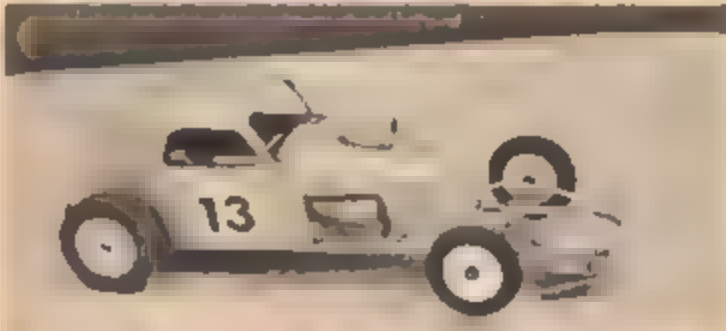
FAR LEFT: Jerry Lalonde created this Kremlin powered model from a Scuderia Dragster. **LEFT:** Lalonde's AMT Fiat gets the "juice" from a Pittman DN 704 A.



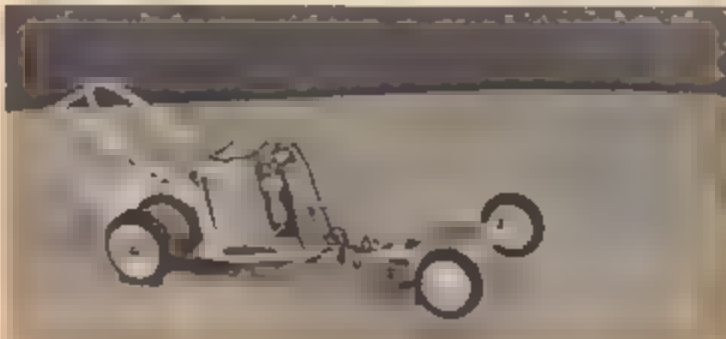
FAR LEFT: A favorite with Lalonde, this 1932 Deuce Coupe is powered by a Wilson motor. **LEFT:** More beautiful work by Lalonde of Kansas City. This '25 "T" is driven by a 704-A.



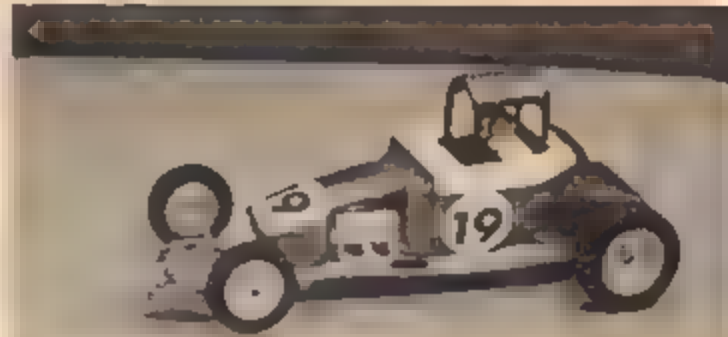
Club president, Dale Titus keeps his Buick Riviera ready for wheel stands at the drop of a challenge.



Starting with the basic AMT Fiat kit, Jim Harkness selected the Kemtron for versatility.



With a D1-85 motor under its belt, this custom dragster is also a part of Jerry Lalande's collection.



Jim Proctor feels he gets best performance for his '27 "T" by using a Kemtron for power.



An old favorite with model builders, the '40 Ford, has been given a new look by John D. Cox.



Designed for action, this '32 Ford with Kemtron power was built by John D. Cox from Kansas City, Mo.



From Independence, Mo., Club president, Dale Titus favors a Kemtron powered Scuderia dragster.



This 1925 "T" built by Jerry Lalande, and driven by a 704-A, presents a formidable challenge on any track.



Races are held nightly at the Keenecraft Hobby Center, 5300 E. 24th St., Kansas City, Mo.

NEW ZING FOR

STROMBECKERS

FRONT WHEEL DRIVE or FOUR WHEEL DRIVE

by George Siposs

One tends to accept the fact that since real cars are mostly driven by their rear wheels, the same should apply to slot racers. But stop for a moment and think of this: the last time your rear wheels slipped and rotated helplessly at the start didn't you wish you had a more positive drive system . . . more driven wheels in contact with the track . . . better cornering . . . more control in corners . . . The earmark of the true slot enthusiast is the constant desire to improve performance by experimenting. Some experiments may be very time consuming and don't really prove anything. What we really need is some simple and effective way to prove or disprove a theory.

Practically all slot racers have started with the basic Strombecker car having a "square" chassis. Most of us still have an old Strombecker kicking around the

scrap box, so if you want to see what front wheel drive, or four wheel drive cars can do, here is an easy way to find out. All you need is a basic Strombecker assembly, some hand tools and a little time. The two simple experiments described here will determine once and for all if your driving technique or, your home track are better suited to the conventional or, the unconventional methods of conveying the driving force from the motor to the track.

FRONT WHEEL DRIVE.

To start this project, disassemble your car and cut off the inner flag bushing from the chassis. Using a pair of shears, cut out a sheet metal bracket to fit this bushing and to fit the chassis as shown on Fig. 1. Epoxy parts together after carefully aligning components. When the epoxy is set, insert flag into the bushing



SHEET METAL BRACKET (APPROX .015/.020)

THICK

CLEARANCE FOR AXLE

PRESENT FLAG

CUT THIS
BUSHING OFF

MOTOR

MAKE BRACKET
(SEE ABOVE)

BUSHING IS NOW
EPOXIED HERE

NEW DIRECTION

EPOXY

FIGURE 1

that is now the new front end. Make sure enough weight is added to ensure good traction. If the pickup strips exert too much pressure on the track tape, the front or driving wheels will just spin around. Once the proper weight distribution is found, you can drive the car around. You will notice a change in the driving style required. The car's rear end may swing around wildly, however, since the rear wheels don't do any work it makes no difference. The car can now be driven out of trouble spots instead of just easing up on the throttle. In essence, the driving wheels pull the car instead of pushing it. Should you not find the new riding characteristics to your liking, simply put the flag back to the old bushing position and drive the car in the conventional manner. If the experiment is successful, you'll probably want to build an all-out front wheel drive car.



The author's 4-wheel drive, single-motor chassis which produces superb handling characteristics over conventional cars. Chassis exhibits good craftsmanship.

CUT OFF "OLD"
BUSHING & SUPPORT

INSTALL CROWN
GEAR

SHAFT EXTENSION

BRACKET - EPOXIE INSIDE CHASSIS

CHASSIS MEMBER (WAS SUPPORTING
MEMBER FOR INNER BUSHING)

OLD DIRECTION

NEW DIRECTION

SEE FIG. 3 FOR
DETAILS

FIGURE 2

BUSHING AND FLAG MAY
BE EPOXIED TO THIS END

FIGURE 3

SHAFT

FOUR-WHEEL DRIVE FOR POSITIVE TRACTION.

On some very hilly courses, extra traction is very desirable. To achieve maximum efficiency, the driver should use true differentials on both axles, since all wheels describe a different path. In slot car racing, you may find that a slight breakaway of the wheels is actually beneficial — provided this happens under control. On the other hand, since all four wheels are connected mechanically in the four-wheel drive system, wheel spin may be entirely absent unless you have an extremely powerful motor.

To convert your Strombecker chassis

• Cut out a bracket from sheet metal. An old tin can will do for material. Cut the flag bushing and its supporting member from the longitudinal members of the chassis as shown on Fig. 2. The cut-out part and the bracket are epoxied to

the other end of the car so that they just clear the driving gear (Fig. 3)

• Another small bracket is made to serve as shaft support. This bracket fits between the main chassis members and has a suitable hole drilled into it to accept the shaft extension. The new shaft extension is little under $\frac{1}{8}$ " long and has a pinion pressed into it. The added shaft is connected to the extension of the motor shaft by rubber tubing or flexible spring cable (such as movie projector drive cable). The new shaft, flexible connection and the bracket with the hole in it have to be assembled while the bracket is being epoxied to the chassis. This will ensure proper alignment. Needless to say that both axles must have identical crown gears, otherwise the assembly would not work. Perfect alignment of the drive system is imperative! The additional friction load created by the addition of a new gear will add an

extra load to the motor. If this is not watched carefully, all the benefits will be offset by the losses in efficiency of the badly aligned drive system.

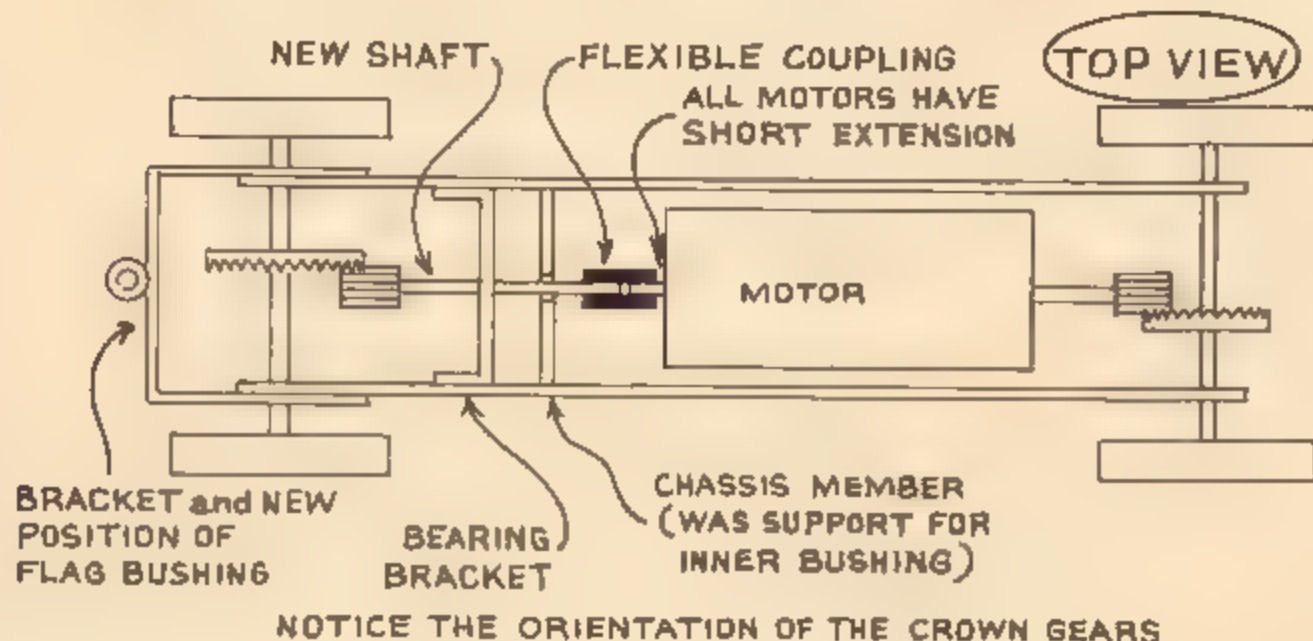
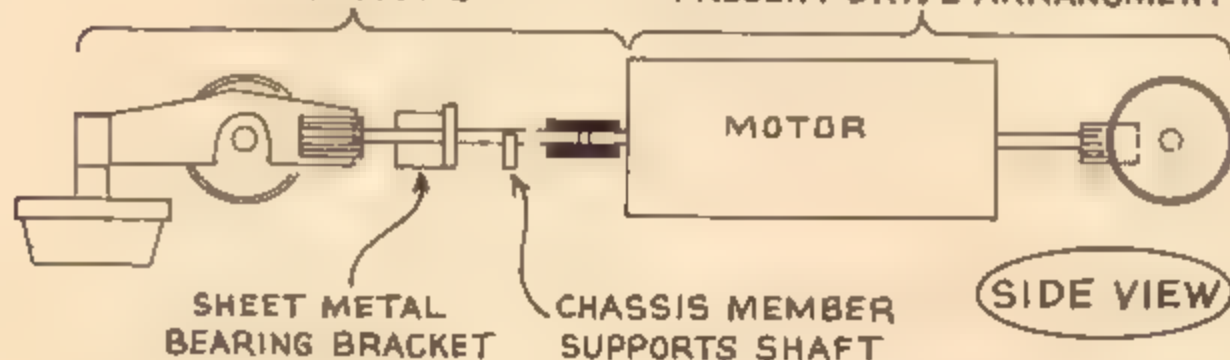
If you experimented with front wheel drive as well, you may want to insert the pickup flag first in the rear bushing, then in the front bushing to check on the motor's weight being on the front or rear driving wheels. All you have to do is to change the flag and re-connect motor leads. It may be necessary to install a rear axle in both positions since "rear" axles have serrations on them to prevent crown gear slippage.

The driving technique will be quite different from anything you have ever experienced. More weight may have to be added to the car but less slipping and sliding will be evident. The added traction and control over twisting and hilly courses will make this project well worth your effort.

(FOUR WHEEL) DRIVE ADDITIONS

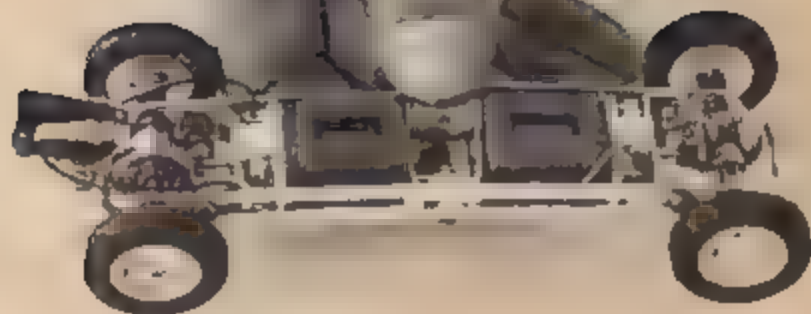
ADDITIONS

PRESENT DRIVE ARRANGMENT



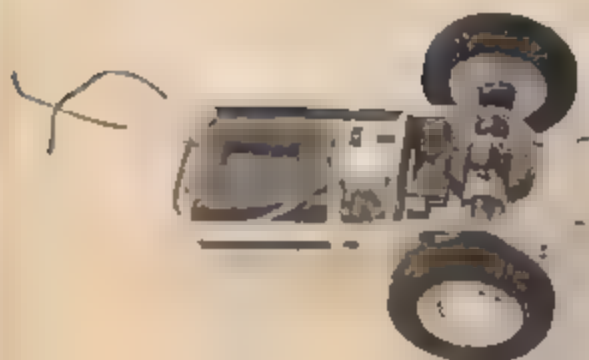
An easy-to- build . . . TWIN- ENGINE DRAGSTER

By Bob Paeth



Motor retaining brackets, at top, must be bent with pliers to new size shown below. Two newly bent brackets at right must be able to slip inside.

Normal front half of Revell frame is left as is, but will become rear end of our twin-powered dragster.



A second front frame half is also used, but lip has to be bent as shown to allow mounting of guide shoe.

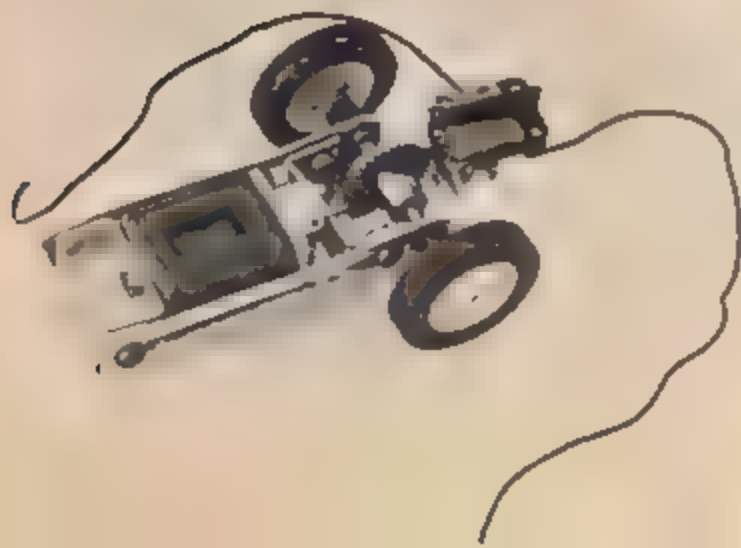
It still remains to be conclusively proven if twin-engine dragsters are faster than their single-engined counterparts. As far as full size cars go, tests show that two 500 hp engines coupled together do not produce 1,000 hp as might be expected. Together they might turn up around 700 hp — and that additional 200 horses is just sufficient to propel the engine that produces it. In short, if one engine of a dual engined car is removed, the car will still run a nearly equal speed and a.t.

But there is no denying the dramatic race against the clock that a twin dragster puts on for the awe-struck crowd. And whether that car is a real one or one scaled down to slot racing size, the effect given the onlookers is much the same "Gee whiz!"

Until recently twin-engined slot dragsters were few and far between, due primarily to the difficulty of constructing one, necessarily from scratch, to say nothing of financial outlay when two motors, two gear sets, have to be procured. However a bit of digging into the parts boxes supplied to slot racing dealers by Revell showed that now a twin-motor scale dragster can be put together using only readily, and inexpensively, available parts.

For the tool department, all that is necessary is a screwdriver, cutting pliers, long-nose pliers, and a small wrench. So trot on down to the corner slot dealer, pick up the pieces used in this construction series of photos, and go drag racing in a big way within a few short hours.

Assembled front half ready for joining to the other half whose only difference is lack of guide shoe.



Standard Revell guide shoe and retaining collar is used, but added spacer has to be slipped over pin for needed spacing.

Re-bent stock motor brackets are tried for fit in frame. One will hold end of front motor, other rear motor.



The finished version in upside down position, ready for the track. Ideas for a body can be obtained by looking through both this and previous issues of M.C.S. magazine. Car will spin all four wheels under hard acceleration.



This month's article is a potpourri of recent happenings here in England. Perhaps the most important of these was the meeting of the National Slot Executive on the 29th of September at the Clifton Inn, Rugby. As Area Organizer for the North West I occupy a seat on the Executive and can therefore let you have the news as early as anybody. The meeting was called to consider the rules under which racing has been carried on in the past and to make such alterations as were deemed necessary. In the main the old rules were not changed except for small items here and there. The maximum width of cars was agreed to be allowed to stay at 2 1/4 inches. All cars must start with a securely fixed driver . . . and after a lot of deliberation . . . it was decided that the previous rule saying that the car must finish with a driver should be done away with . . . so the fellow who has done 99 laps and then by reason of a bit of ham-fisted marshalling has his driver knocked out of the car, need no longer stop and refit the offending bit of plastic and thereby allow the man who was in second place to pass him . . . this amendment is going to cause a lot of argument between the clubs and quite a few clubs will continue to use the old method as they insist that a scale car isn't correct on the track without a driver at all times. After all, a full-size Lotus has yet to win a Grand Prix with no driver in the seat and what

IN THE GROOVE IN ENGLAND

ANOTHER IN OUR SERIES OF
REPORTS FROM GREAT BRITAIN
ON THE STATUS OF TABLE TOP
CARS AND RACING IN
THE HOME OF THE SPORT

BY DUNCAN LAYCOCK

applies to fullsize should also apply to the scale cars . . . and so the arguments will rage. However the fact remains that as a National rule the amendment will be the more widely used method.

The standards for track construction were defined as follows: The slot shall be a minimum width of 1/8-inch and a maximum of 3/16-inch (this maximum is to allow for those who do not manage to cut their slot straight. The slot shall be 3/16-inch deep and when a bottomless slot is used there must be one point on each slot that is only 3/16-inch deep to act as a check on the overall depth of the guides fitted to the cars. The pickup tape shall be a minimum of 1/8-inch wide and a maximum of 1/4-inch wide. The only exception to this rule will be where Zinc spray methods are used. There shall be contacts available on each side of the slot at 3/16-inch from the center of the slot . . . your pickups should therefore be 3/8-inch apart. The power supply to each lane shall be a minimum of 12 volts, 2 amperes.

Clubs are now given three alternative methods for running meetings: either (1), all cars timed and the fastest going on from the heats or (2), all heats of fixed duration and the cars covering the greatest distance to go on or (3), the heats to be on a knockout basis with all heat winners fighting for places in each successive round.

On cars the guide must at no point be



This Ferrari Sports is a one-of-a-kind model reproduction, carved from Balsa by D. Lord of Ashton. The chassis car-

ries a K's motor with four-wheel drive through Eldi gears. The front wheels drive and steer through universal joints.





Keeling Chassis for the Morris Mini body shell. Trix motor drives the rear wheels through skew gears. Underside of chassis (right) has strengthening strips soldered on front that are also stops for the guide.



British enthusiast R. Jackson is another bona fide wood scratch builder. This Ferrari 250 shows his skill.





MCS author Duncan Laycock is the builder-driver of this Maserati A6 GCS.

more than one inch from the front axle and must not be more than 3/4-inch in length, and shall be of such depth in the slot as not to touch the 3/16-inch depth slot bottom. Rule books and lapel badges are to be made available and membership of ECRA will be 10 shillings and 6 pence per annum (\$1.50). Membership will entitle you to participate in all meetings and events organized by ECRA and its member clubs. The National Championships will be held early in 1964 and also to be organized will be a current formula one championship.

That, then, is a brief resume of the National meeting and the changes in the standards that will operate in the future for 1/32nd scale racing. And what has been happening elsewhere? Well at Whitehaven we held a very successful open meeting on the 22nd of September and the Ashton club is holding its first meeting on the 5th of October. The organizing club is not racing themselves, but is devoting its entire time and energies to giving visitors an enjoyable time. I'm enclosing photographs of some of the out of the ordinary cars that I have come across recently and trust that the Editor won't consign them all to the ashbin . . . there are some interesting lines on four wheel drive. Slot on!



The little Ford Zodiac at left has a Keeling chassis with dual engines. The front wheels are powered by a Microperm motor driving 3-to-1 spur gears; rear wheels are driven by another Microperm with 3-to-1 built-in gears.



There's the U.S. influence in this Ford Galaxie body shell of balsa by R. Jackson. Chassis shows four-wheel drive from a Pittman driving a layshift.





Space frame chassis has a rear-wheel drive from a K's motor which sends power out to Edle gears.



The sheet metal body of this scratch-built A.T.S. by W. Keating received its high finish from buffing. A K motor drives Edle gears.



Ray Baker's Jaguar XK 120 is another four-wheel drive original with a Pittman 62B driving Ripmax changeable spur gears to a layshaft driving Edle gears for the final drive. Springs at rear give self centering to guide shoe.



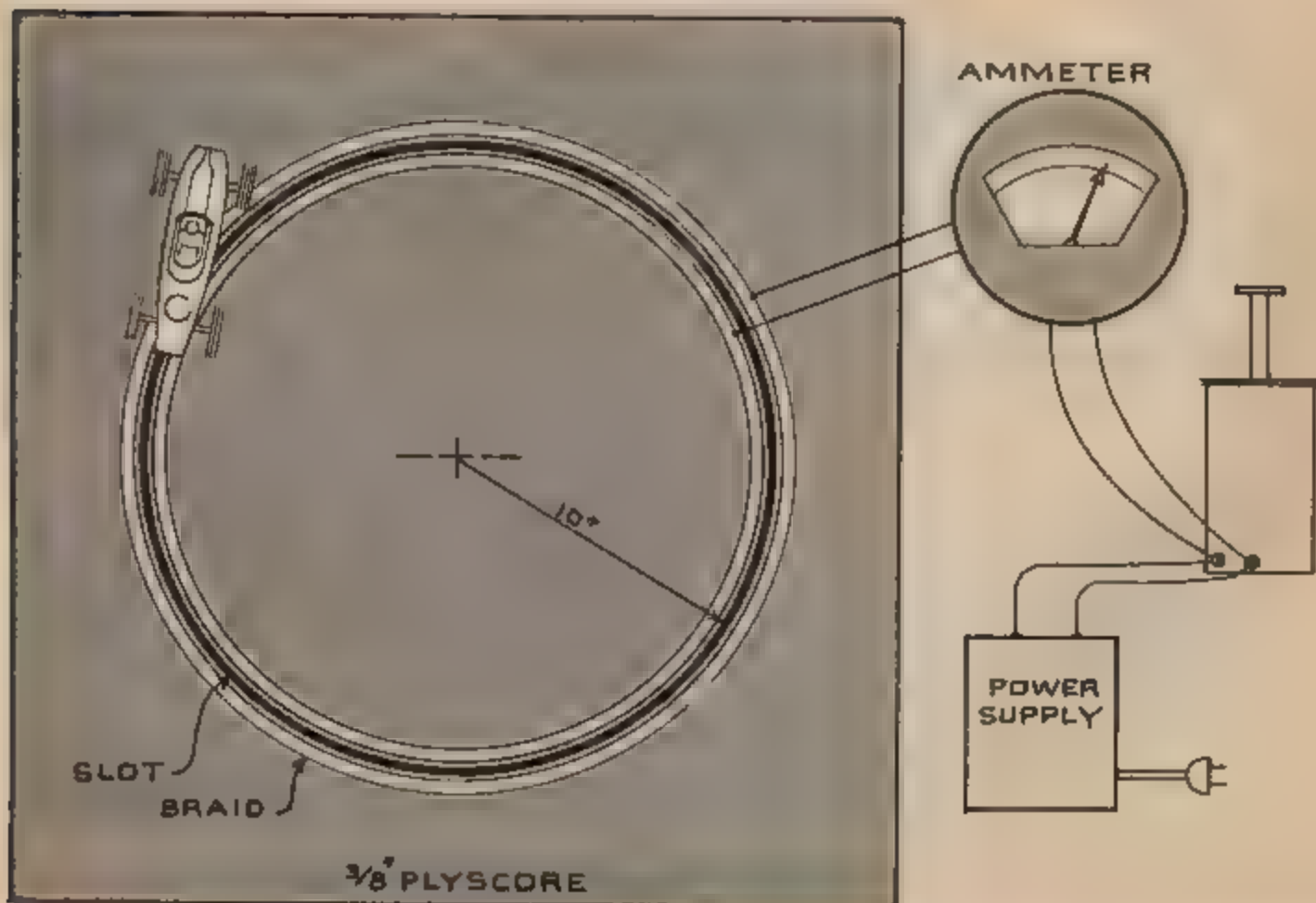
SLOT RACER'S

NEW IDEAS IN RACING MODIFICATIONS

TEST TRACK FOR CHASSIS AND SUSPENSION TUNING

It is as true in slot-racing as it is in big sports car racing; a "big-inch" engine in an unwieldy chassis will never beat a good handling small car. This test track makes chassis tuning much more simple and accurate.

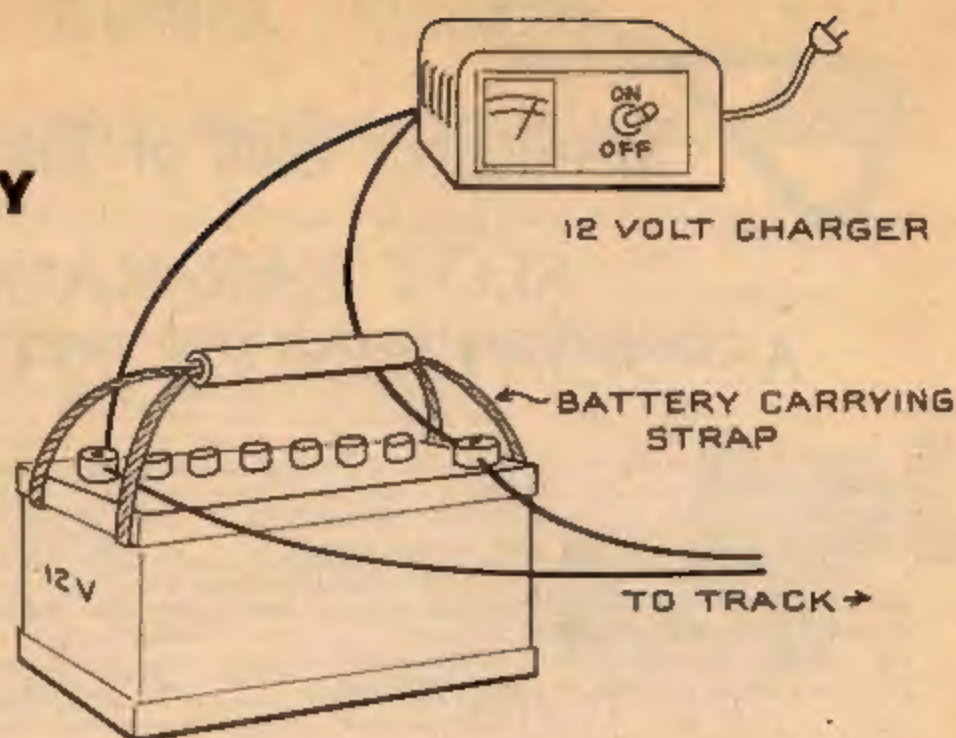
Human reaction time makes testing modifications a tedious and unreliable job because it is difficult to turn two or more nearly identical laps. The use of this test track completely eliminates human reaction time, and therefore, human error. Simply set the car in the slot and turn up the hand control until the car reaches the limit of adhesion. Watch the ammeter. When the car finally spins off, write the meter reading down. Now make any changes to the chassis that you wish (wider tires, weight distribution, etc.) and set the car on the track once more and repeat the process. Avoid flash readings (i.e., quick bursts of speed causing the car to spin too quickly for you to get a good reliable meter reading) as you will just be fooling yourself. The higher the sustained meter reading, the faster your car has to be traveling. Try to make all tests with the same motor, as some take more power than others without necessarily going faster (due to worn brushes, etc.) and you don't want to be misled.



DOUBLE DUTY POWER SUPPLY

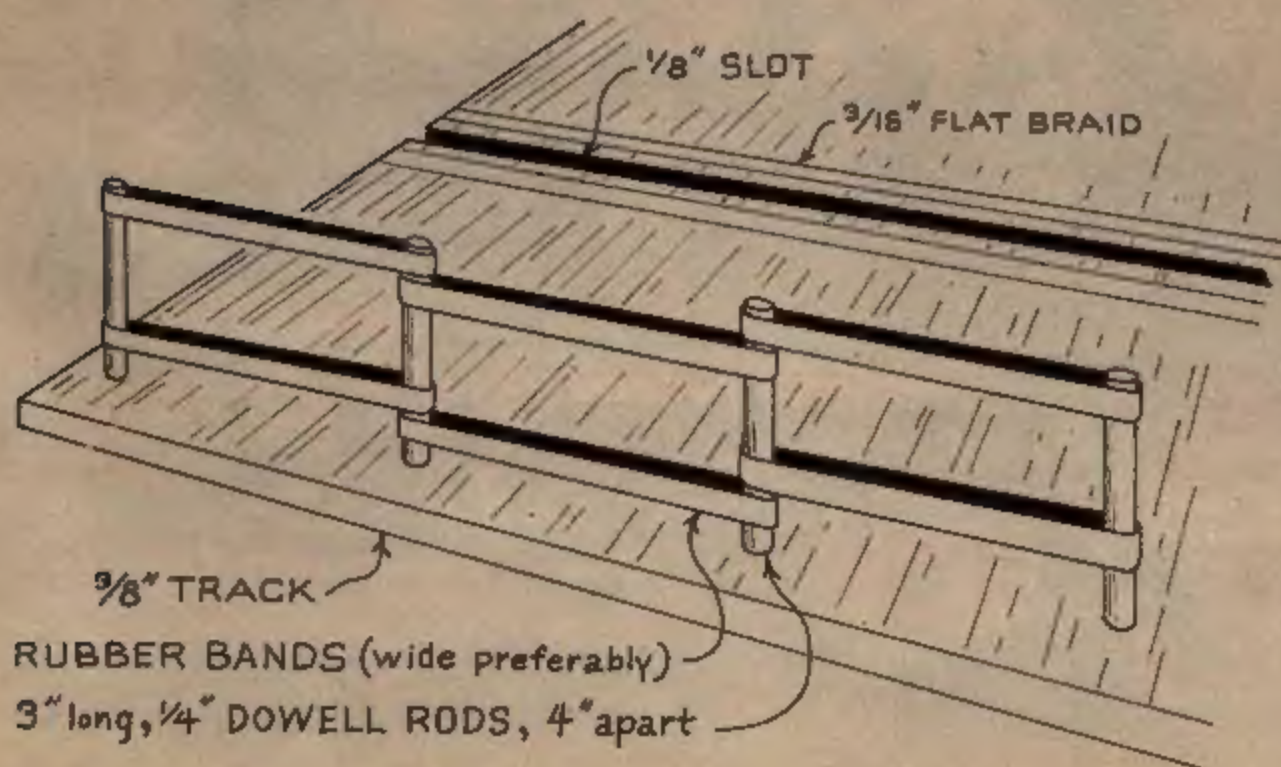
A 12 volt battery, as is commonly known by now, makes an ideal power supply due to the steady, reliable current flow. By utilizing a battery charger and a carrying strap permanently mounted on the battery, the power supply can double as a fully charged, warm booster battery on a cold winter morning when the car just groans. Use large alligator type clips on the battery so it can be disconnected quickly from the slot-racing table, and carried out to the car by the carrying straps.

The power supply is one of the most expensive components in the slot-racing layout, and by making it do double duty the cost seems less formidable.



RUBBER BAND FENCING

A truly efficient and exceptionally inexpensive fence can be made using the method shown below. Dowell rods, 1/4" thick, cut to 3" lengths and placed in holes drilled approximately 4" apart, result in an easily constructed, good looking fence. Not only does this type fence keep a spinning car on the track, it even "snags" a rolling car that would normally pin-wheel completely over a conventional fence.





Spotlights: Club of the Month

SLOT CAR RACING ASSOCIATION OF PITTSBURGH

S.C.R.A.P., the Slot Car Racing Association of Pittsburgh, was organized just a year ago. In that time it has doubled its membership and is now the most active table top club in the Pittsburgh area. The major club track has been designed to be quite portable so that the members can set it up in various locations and show the uninitiated just how much fun true slot racing can be. When assembled, the track is 14 by seven feet with equal lap lengths of 28 feet. It breaks down so that the entire track can be carried in a standard passenger sedan.

There are alternate tracks in Avalon and Parment, Pa. S.C.R.A.P. runs cars in 1/25th or 1/24th scale in five classes, Grand Prix, Sports, Stock, Compacts and Modifieds. The class to be featured is changed every four weeks. The club meets every Sunday evening and runs a complete program of time trials, qualification heats and feature races, similar to the procedure outlined in the October, 1963 issue of MCS. Those interested in further information can write the Club President, John Hathaway, 121 Clairtonica St., Pittsburgh 5, Pa.,





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Dynamic Models ANNOUNCES

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Where desired, the "DynaMite" chassis components are available with all popular bearings including aluminum (runs great with D.M.'s hardened and ground axles). Bronze bushings and roller bearings also available.

Two screws give you complete adjustability for all 1/32 and 1/24 body lengths. No bending, soldering or cutting. Want added weight? Lead weights available that mate to the connecting tongue with one screw. The "DynaMite" body mounting hits fasten easily to this revolutionary new chassis.



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NO. 664 Chassis complete for Pittman No. 704 motor.

(NO. 664 consists of parts nos. 678; 683; 670) **\$1.98 ea.**



NO. 665 Chassis complete for following makes of motors:

Pittman DC60, DC70, DC62B, DC195; Revell 66, 77, Mabuchi—Strombecker—Buzco

(NO. 665 consists of parts nos. 678, 683, 671) **\$1.98 ea.**

"DynaMite" REAR MOTOR MOUNT ONLY



NO. 670

Rear Motor Mount for Pittman 704

\$1.19 ea.

NOS. 671 — 672 — 673

Rear Motor Mount for following makes of motors: Pittman DC60; DC70; DC62B; DC195, Revell 66; 77, Mabuchi — Strombecker — Buzco

NO. 671 Aluminum Bearings **\$1.19 ea.**

NO. 672 Bronze Bearings **\$1.59 ea.**

NO. 673 Roller Bearings **\$4.19 ea.**



"DynaMite" FRONT END ONLY



NO. 678 Front End for 1/32" axle. Aluminum bearings. **\$1.69 ea.**



NO. 681 1/16" wire Front End including four wire retainers **\$1.59 ea.**

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NO. 683 Tongue

\$1.59 ea.

"DynaMite" CHASSIS WEIGHTS



NO. 688 Two-1/2 ounce lead weights with screws **\$1.49 ea.**

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